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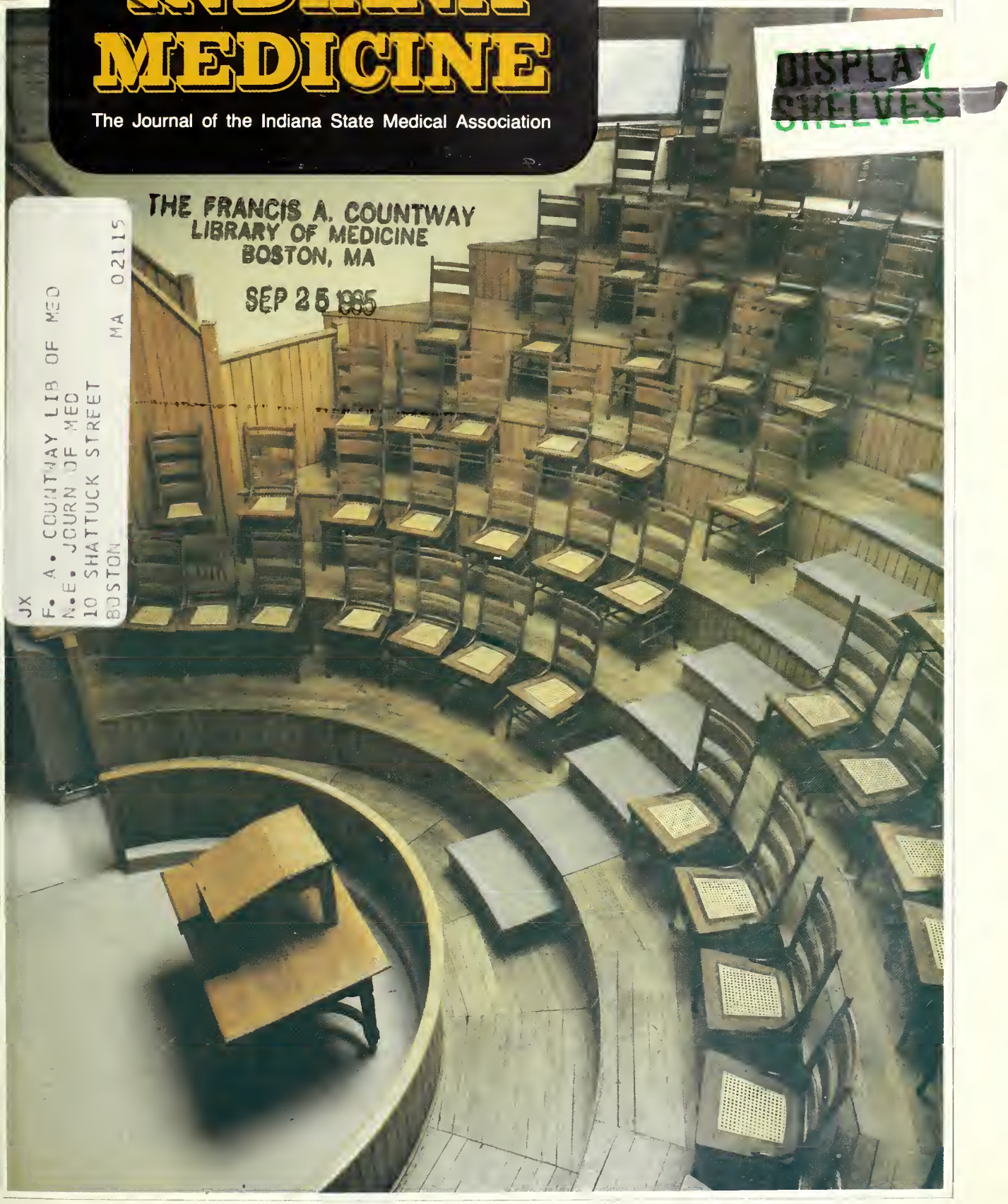
SEPTEMBER 1985 VOL. 78 NO. 9

INDIANA MEDICINE

The Journal of the Indiana State Medical Association

The Old Pathology Building

SEE MEDICAL MUSEUM NOTES



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INDIANA MEDICINE

Vol. 78, No. 9
SEPTEMBER 1985

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USPS 284-440
ISSN 0746-8288

OFFICE OF PUBLICATION:
3935 N. Meridian St.,
Indianapolis, Ind. 46208
Tel: (317) 925-7545

INDIANA MEDICINE (ISSN 0746-8288) is published monthly by the Indiana State Medical Association. Second-class postage paid at Indianapolis, Ind.

POSTMASTER: Send address changes to INDIANA MEDICINE, 3935 N. Meridian St., Indianapolis, Ind. 46208.

Yearly subscription rates: $20 domestic, $22 Canada, $23 foreign. Library rates: $18 domestic, $20 Canada, $21 foreign. Senior ISMA members and full-time medical students—$10. Single copies not available. Subscriptions renewable only in January and July.

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All issues since 1967 are available on microfilm from University Microfilms International, 300 N. Zeeb Rd., Ann Arbor, Mich. 48106. Indexed in Index Medicus and Hospital Literature Index.

Advertising rates and data available upon request.



ABOUT THE COVER

This is the amphitheater of the Old Pathology Building in Indianapolis, built in 1895. It is Indiana's oldest existing medical amphitheater, a tour highlight of the Indiana Medical History Museum. For a report on activities of the museum, see "Medical Museum Notes."

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MEDICAL MUSEUM NOTES

CHARLES A. BONSETT, M.D., Indianapolis



THIS MONTH'S illustration, both on this page and on the front cover, is the amphitheater of the Old Pathology Building, Indiana's oldest existing medical amphitheater. The chairs are the original. The room appears today essentially as it did in 1895 when the building was erected.

Since most ISMA physicians make volunteer contributions to the Indiana Medical History Museum (which is another name for the Old Pathology Building) when paying their annual dues, it is appropriate that an account be given from time to time of the museum's activities and expenditures; hence, the photographs of the amphitheater provide the introduction to this particular subject. The present report is for the year 1984.

Financial

Total revenue for 1984 was $34,176.96. Voluntary contributions from the ISMA membership accounted for $10,152.52. In addition, the I.U. School of Medicine, class of 1933, raised $2,150 for the museum.

The museum worked with the Mental Health Association of Marion County to co-sponsor a fund-raising production. This was a play, given in the amphitheater, about the 19th century pioneer in the mental health movement, Dorothea Dix; it was entitled, "Not Above a Whisper." This was followed by a reception in the home of Dr. Glenn Irwin. This benefit performance netted the museum $2,166.05.

The Marion County Auxiliary donated $200 and Mallone Associates contributed $250. The remainder of the income was derived from interest on the museum's investments. The book value of the museum's assets on Dec. 31, 1984 was $164,503.12. Total expenditures for 1984 amounted to $28,842.41.

Restoration

The architectural firm of Richardson, Munson and Weir was hired to perform an architectural and mechanical systems survey of the Old Pathology Building. Such a report is a necessary first step in the restoration process of the building. In their written report to the board, the firm outlined its suggestions for space use, restoration of the historic portion of the building, creation of a modern exhibition area (in the third floor attic space) and installation of a climate control system for the building. The firm's estimate for the work outlined was $503,500. Before such a plan can be considered for implementation, however, some type of long-term lease arrangement (99 years) must be made with the state. This next logical step is to be pursued during 1985.

At their April 1984 meeting, the museum's board of directors approved a long-range plan for the museum to cover the next five years, including steps to insure long-term financial and legal security; hence, the need for the lease arrangement with the state. Without such an arrangement, the museum cannot raise money to restore the building or insure improvements.

Collection Management and Development

In 1983 the area under the amphitheater was remodeled for storage, and a 72-page guide for cataloging the museum's collection was prepared by the curator.

In 1984 sixteen separate gifts with a total of 198 artifacts were added to the museum's collection. Cataloging is a lengthy process which entails the dating, description and conservation of the museum artifacts.

Educational Programs

During 1984 the museum, in cooperation with the Indiana Historical Society, began publishing its first newsletter, the "Snakeroot Extract." The museum worked with the Indiana Historical Society to open an exhibit entitled, "Medicine in Antebellum Indiana: Conflict, Conservatism and Change." A catalog of the exhibit was published.

Two prominent medical historians were among the museum visitors for 1984. They were James Harvey Young, Ph.D., professor emeritus at Emory University, a noted scholar on food and drug legislation and medical quackery; and Madge Pickard, co-author of *The Midwest Pioneer: His Ills, Cures and Doctors.*

Special Meeting

A special meeting of the membership of the Indiana Medical History Society, Inc., will be held Saturday, Oct. 12, 1985 at 10 a.m. at the Old Pathology Building, 3000 W. Washington St., Indianapolis 46222. The name change of the organization will be voted on at this meeting. The board of directors will meet in conjunction with the membership.

Angina comes in many forms...



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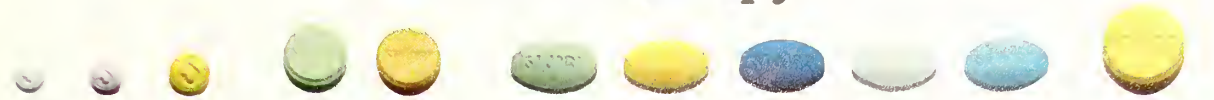
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See following page for brief summary of prescribing information

SORBITRATE

(ISOSORBIDE DINITRATE)

Please consult full prescribing information before use. A summary follows.

INDICATIONS AND USAGE [illegible] is indicated for the treatment [illegible] isosorbide dinitrate may be used [illegible] severity of anginal attacks and can be expected to [illegible] (isosorbide dinitrate) is indicated for prophylaxis of angina [illegible] situations likely to provoke anginal attacks. Because [illegible] isosorbide dinitrate are not indicated for acute [illegible]

CONTRAINDICATIONS: [illegible] is contraindicated in patients who have shown [illegible] to either nitrates or nitrites. Epinephrine and [illegible] are ineffective in reversing the severe hypotensive events associated with [illegible]

WARNINGS: [illegible] during the early days of an acute myocardial [illegible] the effects to use organic nitrates in early infarction. [illegible] that should be used because of the [illegible] hypotension.

PRECAUTIONS: **General**: Severe hypotension and vasodilation, particularly with upright posture, may [illegible] (I.S.D.N.) SORBITRATE. The drug should therefore be used with caution in [illegible] who may have blood volume depleted from diuretic therapy or in subjects who have [illegible] (eg, below 90 mmHg). Paradoxical bradycardia and increased [illegible] may accompany nitrate-induced hypotension. Nitrate therapy may aggravate [illegible] and hypertrophic cardiomyopathy.

Marked symptomatic orthostatic hypotension has been reported when calcium channel [illegible] and nitrates were used in combination. Dose adjustment of either class of [illegible] may be necessary.

[illegible] tolerance to other nitrates and nitrites may occur. Tolerance [illegible] and cross-dependence to the effects of isosorbide dinitrate or nitroglycerin has been [illegible] in normal individuals experiencing through occupational exposure, and in isolated [illegible] in the laboratory. The importance of tolerance to the appropriate use of [illegible] dinitrate in the management of patients with angina pectoris has not been [illegible]. However, one clinical trial using treadmill exercise tolerance (as an end point) found [illegible] duration of action of oral isosorbide dinitrate following the first dose (after a 2 week [illegible] washout) and only a 2 hour duration of effect of the same dose after 1 week of [illegible] dosing at 4 hour intervals. On the other hand, several trials have been [illegible] to differentiate isosorbide dinitrate from placebo after 4 weeks of therapy and in open [illegible] that effects seen decline after as long as several months.

[illegible] nearly all occurs in industrial workers continuously exposed to nitroglycerin. Moreover, physical dependence also occurs since chest pain, acute myocardial infarction, and even sudden death have occurred during a temporary withdrawal of nitroglycerin from the worker. [illegible] clinical trials in angina patients, there are reports of anginal attacks being more [illegible] than pre-solved attacks. Therefore, it is not clear whether the hemodynamic effects soon after nitrate withdrawal. The relative importance of these observations to the routine clinical use of isosorbide dinitrate is not known. However, it seems prudent to gradually withdraw patients from isosorbide dinitrate when therapy is being terminated, rather than stopping the drug abruptly.

Information for Patients: Headache may occur during initial therapy with SORBITRATE. Headache is usually relieved by the use of standard headache remedies or by lowering the dose. If it does not disappear after the first week or two of use.

Drug Interactions: Alcohol may enhance any marked sensitivity to the hypotensive effect of [illegible] isosorbide dinitrate acts directly on vascular smooth muscle, therefore, any other agent that [illegible] depends on vascular smooth muscle as the final common path can be expected to have [illegible] decreased effect depending on the agent.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No long term studies in animals have been performed to evaluate the carcinogenic potential of this drug. A modified two litter [illegible] study in rats fed isosorbide dinitrate at 25 or 100 mg/kg/day did not reveal any effects on fertility, gestation or any remarkable gross pathology in any parent or offspring fed [illegible] dinitrate as compared with rats fed a basal controlled diet.

Pregnancy Category C: Isosorbide dinitrate has been shown to cause a dose related [illegible] embryo toxicity (increase in unossified pups) in rabbits at oral doses of 5 and 150 [illegible] the recommended human daily dose. There are no adequate and [illegible] studies in pregnant women. SORBITRATE should be used during pregnancy [illegible] if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because [illegible] drugs are excreted in human milk, caution should be exercised when SORBITRATE is administered to a nursing woman.

Pediatric Use: The safety and effectiveness of SORBITRATE in children has not been [illegible] established.

ADVERSE REACTIONS: Adverse reactions, particularly headache and hypotension, are [illegible] dose related. In clinical trials at various doses, the following have been observed:

Headache has been the most common (reported incidence varies widely, apparently being [illegible] dose related; with an average occurrence of about 25%) adverse reaction and may be severe [illegible] persistent. Cutaneous vasodilation with flushing may occur. Transient episodes of [illegible] weakness, as well as other signs of cerebral ischemia associated with postural [illegible] may occasionally develop (the incidence of reported symptomatic hypotension [illegible] 3 to 36%). An occasional individual will exhibit marked sensitivity to the [illegible] even the first few doses of nitrates and severe responses (nausea, vomiting, weakness, restless [illegible] pallor, perspiration, cardiac collapse) may occur even with the usual therapeutic dose. Drug [illegible] idiosyncratic reactions, dermatitis may occasionally occur. Nausea and vomiting appear to be [illegible] rare. Case reports of clinically significant methemoglobinemia are rare at conventional dosages of nitrates. The formation of methemoglobin is dose related and, in the case of [illegible] other aldehyde, the methemoglobin that favor methemoglobin formation, even conventional [illegible] of nitrates could produce harmful concentrations of methemoglobin.

DOSAGE AND ADMINISTRATION: For the treatment of angina pectoris, the usual starting [illegible] of SORBITRATE is 2.5 to 5 mg for chewable tablets, 5 mg, for oral (swallowed) [illegible] and oral controlled release forms, 40 mg.

SORBITRATE should be titrated upward until angina is relieved or side effects limit the dose [illegible] individual patient. The magnitude of the incremental dose increase should be guided by [illegible] measurements, such as pain and blood pressure.

The initial dosage for other oral chewable SORBITRATE for prophylactic therapy in angina [illegible] patients is generally 5 or 10 mg every 2 to 3 hours. Adequate controlled clinical studies [illegible] demonstrating the effectiveness of chronic maintenance therapy with these dosage forms [illegible] have not been completed.

SORBITRATE oral doses of 10 to 40 mg given every 6 hours in oral controlled release [illegible] of 40 to 80 mg given every 8 to 12 hours are generally recommended. The extent to which [illegible] development of tolerance should modify the dosage program has not been defined. *The oral controlled release forms, isosorbide dinitrate should not be chewed.*

DOSAGE FORMS AVAILABLE: Sublingual Tablets (2.5, 5, 10 mg), Chewable Tablets (5, 10 mg), [illegible] Tablets (5, 10 mg), and Sustained Action Tablets (40 mg).

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A defense against cancer can be cooked up in your kitchen.



There is evidence that diet and cancer are related. Some foods may promote cancer, while others may protect you from it.



Foods related to lowering the risk of cancer of the larynx and esophagus all have high amounts of carotene, a form of Vitamin A which is in cantaloupes, peaches, broccoli, spinach, all dark green leafy vegetables, sweet potatoes, carrots, pumpkin, winter squash, and tomatoes, citrus fruits and brussels sprouts.

Foods that may help reduce the risk of gastrointestinal and respiratory tract cancer are cabbage, broccoli, brussels sprouts, kohlrabi, cauliflower.

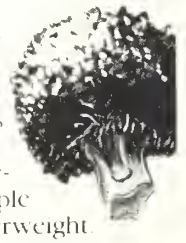
Fruits, vegetables and whole-grain cereals such as oatmeal, bran and wheat may help lower the risk of colorectal cancer.



Foods high in fats, salt- or nitrite-cured foods such as ham, and fish and types of sausages smoked by traditional methods should be eaten in moderation.

Be moderate in consumption of alcohol also.

A good rule of thumb is cut down on fat and don't be fat. Weight reduction may lower cancer risk. Our 12-year study of nearly a million Americans uncovered high cancer risks particularly among people 40% or more overweight.



Now, more than ever, we know you can cook up your own defense against cancer. So eat healthy and be healthy.

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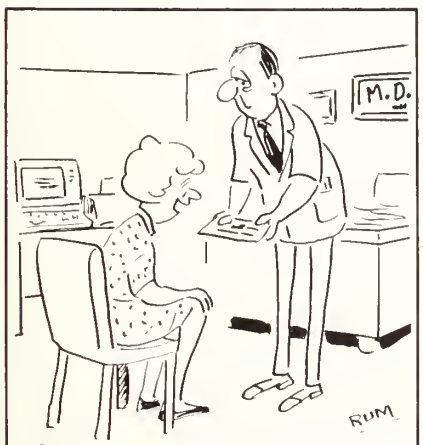
WHAT'S NEW?

News of what is new in the medical supply industry is composed of abstracts from news releases by book publishers and manufacturers of pharmaceuticals, clinical laboratory supplies, instruments and surgical appliances. Each item is published as news and does not necessarily constitute an endorsement of a product or recommendation for its use by INDIANA MEDICINE or by the Indiana State Medical Association.

Blanchard Training & Development, Inc. has released a new book in its "Manager" series. *Leadership and the One Minute Manager* is the newest entry. It and *Putting the One Minute Manager to Work* are the current best sellers. Blanchard's books are adaptable to all types of businesses and situations—big, small and in-between. Based on Situational Leadership theory and practice, the book provides managers with four leadership styles which can be varied from worker to worker and situation to situation.

Scott Paper Company has two new products, each one being packaged in a convenient pop-up box. WypAll Plus® and Economizer® wipers offer strength, softness and absorbency. Both are stored in a new pop-up corrugated dispenser and may be used in all locations, in trucks and in outdoor situations. WypAll Plus wipers come in white and blue and are strong enough to handle all tough jobs. Economizer wipers are highly absorbent and slightly less strong but will handle any but the toughest tasks.

Schering has introduced a new 100 milligram NORMODYNE Tablet. The new size dosage encourages patient compliance during the initial titration phase in which doses of 100 mg. are used. Besides, it has been found that some patients are adequately controlled on 100 mg. b.i.d. No need to divide the 200 mg. tablets.



"Oh good—your computer makes my ailment sound much more exciting!"

Jung® Medical Products has introduced a new Below Knee, Full Foot, VenES® Surgical Support Stocking, an addition to their comprehensive line of ready-made and custom-made elastic support hosiery. The new stocking is made of two-way stretch material which offers greater patient comfort and an accurate fit. The sizes are Small, Medium, Large and X-Large.

The Dosimeter Corporation has developed a new dosimeter viewer and re-zeroing unit that assures workers will know the exposure they receive. They also have developed an alarming dosimeter that warns workers when the exposures they are receiving are greater than permitted by law or safety rules.

Ross Laboratories announces introduction of a New Instant Cold Pack, developed by Ross and sold under the Faultless brand. The Pack gets cold as ice in 3 seconds when squeezed or shaken and will repeat the process for repeated use. It is moldable and will conform to any area of the body. It is so economical it can be kept in the first aid kit, in the automobile, boat, beach or gym bag.

Phytec is a newly organized company that specializes in benchtop analytical equipment for physicians' offices. Phytec markets in-office diagnostic equipment and consumables for chemistry, hematology and electrolyte analyses. Services include complete installation, supplies management and operator training. Additional types of instruments are anticipated for the future.

Northern Information Technology announces a new brief case-size portable Tele-Imager. It will transmit and receive a video "snapshop" over ordinary dial-up telephone lines. Now, using a telephone, doctors can review x-rays. Also great for teleconferencing in your own office.

AQUA-FLO Water System I is a new water softener and water purification device which operates on a filter system to remove hard-water chemicals, chlorine, bacteria and industrial chemicals now appearing in many city and town water supplies. It is especially developed for homes, apartments and motor homes. The only maintenance is a once or twice a year change of the filter cartridge which can be done by the owner. It softens water by filtration and does not add sodium.

Medical Information Systems has a new custom-made, plastic laminated VITAL care which carries a complete medical history, contact names and phones, insurance information, allergies, living will, ECG, treatment authorization, organ donor authorization and other related medical/personal ID information. It can be read in seconds with any microfiche reader, as found in hospitals and pharmacies. Two sizes: one a credit card size for the wallet, the other minisize for the keyring.



"I don't like the looks of this at all."

FUTURE FILE

Newborn Symposium

"Neurological Problems in the Newborn" is the theme for the 19th Annual Newborn Symposium to be conducted by the Department of Pediatrics, University of Louisville, on November 7 and 8 in the Norton Kosair Children's Hospital Auditorium. John H. Menkes, M.D., professor of Neurology and Pediatrics, University of California, will be the keynote speaker.

For full information write to Billy F. Andrews, M.D., Department of Pediatrics, University of Louisville, Louisville, Ky. 40292.

Primary Care Update

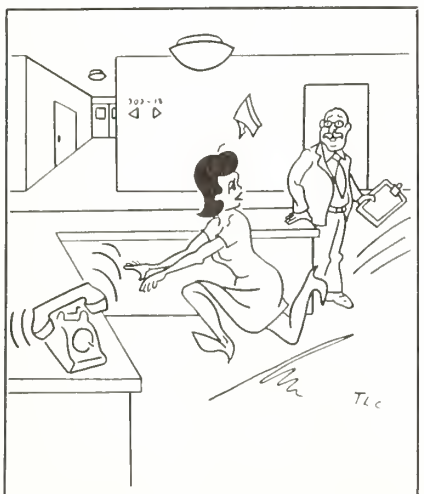
"A Primary Care Update" is to be the theme of the 70th Scientific Assembly of the Interstate Postgraduate Medical Association. The assembly meets on November 18 to 21 at the Marriott Hotel in New Orleans.

Program and registration materials are available from IPMANA, P.O. Box 1109, Madison, Wisc. 53701.

Neurology Course

"Neurology for the Non-Neurologist" is a CME course sponsored by Rush Medical College for December 4 to 6. It meets at the Chicago Westin Hotel.

Write or phone: University Office of CME, 600 S. Paulina, Chicago 60612—(312) 942-7095.



"Can't we get an unlisted number?"

The *Journal of the American Medical Association* publishes a list of CME courses for the United States twice yearly. The January listing features courses offered from March through August; the July listing features courses offered from September through February.

Indiana University CME

For the Primary Care Physician

Oct. 8-9—Care of the Seriously Ill Child, Indianapolis.

Oct. 15—Diagnosis and Treatment of Infections in Patients with AIDS and Other Immunosuppressed Conditions, Indianapolis.

Oct. 19—Medical Management of Ventricular Arrhythmias, Indianapolis.

Oct. 24—Innovative Concepts and Techniques in Clinical Medicine, Richmond.

Oct. 25-26—Indiana Scientific Meeting of American College of Physicians—"Gastrointestinal Diseases; and "State of the Art Lecture: Bone Marrow Transplantation," Indianapolis.

For the Specialist

Sept. 27-28—Management of the Patient with Breast Cancer, Indianapolis.

Sept. 30-Oct. 2—Advanced Echocardiography.

For more information, contact the CME Division, I.U. School of Medicine —(317) 264-8353.

Medical Staff Conference

The AMA will conduct its inaugural National Medical Staff Conference October 17 to 19 at the Sheraton Washington Hotel, Washington, D.C. It is intended for chief executive officers, chiefs of medical staffs, and trustees.

The meeting will focus on hospital and medical staff organizational issues. It will provide workable suggestions to meet pressing needs and expects to create a forum for administrators, trustees, and chiefs of medical staffs to discuss important hospital matters.

Registration is limited. For reservations and/or further information, call 1-800-621-8335.

Methodist Hospital CME

Nov. 1-2: Advanced Trauma Life Support, Methodist Hospital, Indianapolis.

Nov. 13: 4th Annual Symposium on Ethical and Moral Issues in Medicine, Holiday Inn North, Indianapolis.

Nov. 15: Diabetes Update, Holiday Inn Airport, Indianapolis.

For more information, contact Dixie Mattingly, CME coordinator, Graduate Medical Center, Methodist Hospital of Indiana—(317) 929-3733.

National Health Policy

The National Conference on Health Policy and Quality of Care for Older Americans meets November 12 and 13 at the Radisson Mark Plaza Hotel in Alexandria, Virginia.

Co-sponsors are the AMA, the American Hospital Association, the American Association of Retired Persons and the American Nurses' Association.

For information and registration forms write to the AMA, Dept. of Health Care Resources, 535 N. Dearborn St., Chicago 60610.

Pediatric Symposium

A Pediatric Symposium will be conducted October 12 and 13 at the Bethesda Oak Hospital, Cincinnati.

The program is co-sponsored by the University of Cincinnati College of Medicine Office of CME and is accredited by the American College of Emergency Physicians and the AAFP for 12 hours credit.

For a copy of the program and other details contact Thomas J. O'Connor, 619 Oak St., Cincinnati 45206—(513) 569-6339.

Evansville Seminars

St. Mary's Medical Center, Evansville, announces "The Endocrine Seminar—Part VI The Testes" for October 17. "Family Practice Residency Seminar—Medical and Legal Perspectives for 1986" will be the subject of the seminar on November 14.

Diabetes Update

"Diabetes Update Seminar" is the title of a CME program to be presented on October 9 at the Good Samaritan Hospital in Vincennes, Indiana.

The all-day meeting will be addressed by well known clinicians in the field of diabetes. CME credit for 5½ hours is approved by the AMA, the ACFP and the Osteopathic Association. Cost of the seminar is $10, which includes lunch. Reservations should be made by September 27.

Reservations and additional information can be obtained by writing or phoning Barbara Cavanaugh, Good Samaritan Hospital, Vincennes, Ind. 47591—(812) 882-5220.

PPO/HMO Conference

PPOs and HMOs will be the subjects of a major conference sponsored by Business Week Executive Programs and McGraw-Hill's Washington Health Letters.

The conference meets at the Drake Hotel, Chicago, on October 28 and 29. A distinguished panel of corporate executives will question representatives from selected PPOs and HMOs and comment on their presentations throughout the two-day event.

For further information, write or phone Aida Vicente, Business Week Executive Programs, 1221 Avenue of the Americas, 33rd floor, New York, N.Y. 10020—(212) 512-4402.

Oncology Update

The Second Oncology Update Seminar will be presented by physicians of the Parkview Regional Oncology Center in Fort Wayne on Saturday, Sept. 21.

The seminar is directed toward primary care physicians, radiation therapy technologists, nurses and medical technologists. The fee is $30 for physicians, $15 for residents and other professionals. It is accredited for six AMA Category 1 hours and six AAFP hours.

Contact Susan Gearhart, R.T.T., Parkview Regional Oncology Center—(219) 482-9681.

Cytopathology

Johns Hopkins University School of Medicine announces its annual "Postgraduate Course in Cytopathology." Prompt response is essential.

The Home Study Course A starts in February and extends into April. The two-week In-Residence Course B is given in Baltimore April 28 to May 8, 1986. Registration is limited.

For details write: John K. Frost, M.D., 604 Pathology Bldg., Johns Hopkins Hospital, Baltimore, Md. 21205.

Hand Surgery

The American Society for Surgery of the Hand conducts an annual Residents' and Fellows' Hand Surgery Conference. The fourth such meeting is scheduled at New Orleans in the Fairmount Hotel. The date is February 16, 1986.

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"Critical Care Conference" is the title of the CME course to be given at the Inn on the Park Hotel, Madison, Wisc. on October 31 and November 1.

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The correspondent is Sara Aslakson, 465B WARF Bldg., 610 Walnut St., Madison, Wisc. 53705—(608) 263-2856.

Diagnostic Radiology

"Diagnostic Radiology Update" is the subject of a CME course to be conducted by the University of Texas Health Science Center at Dallas, October 25 to 27.

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The correspondent is Dolly Christensen, 5323 Harry Hines Blvd., Dallas 75235—(214) 688-2502 or 688-2166.

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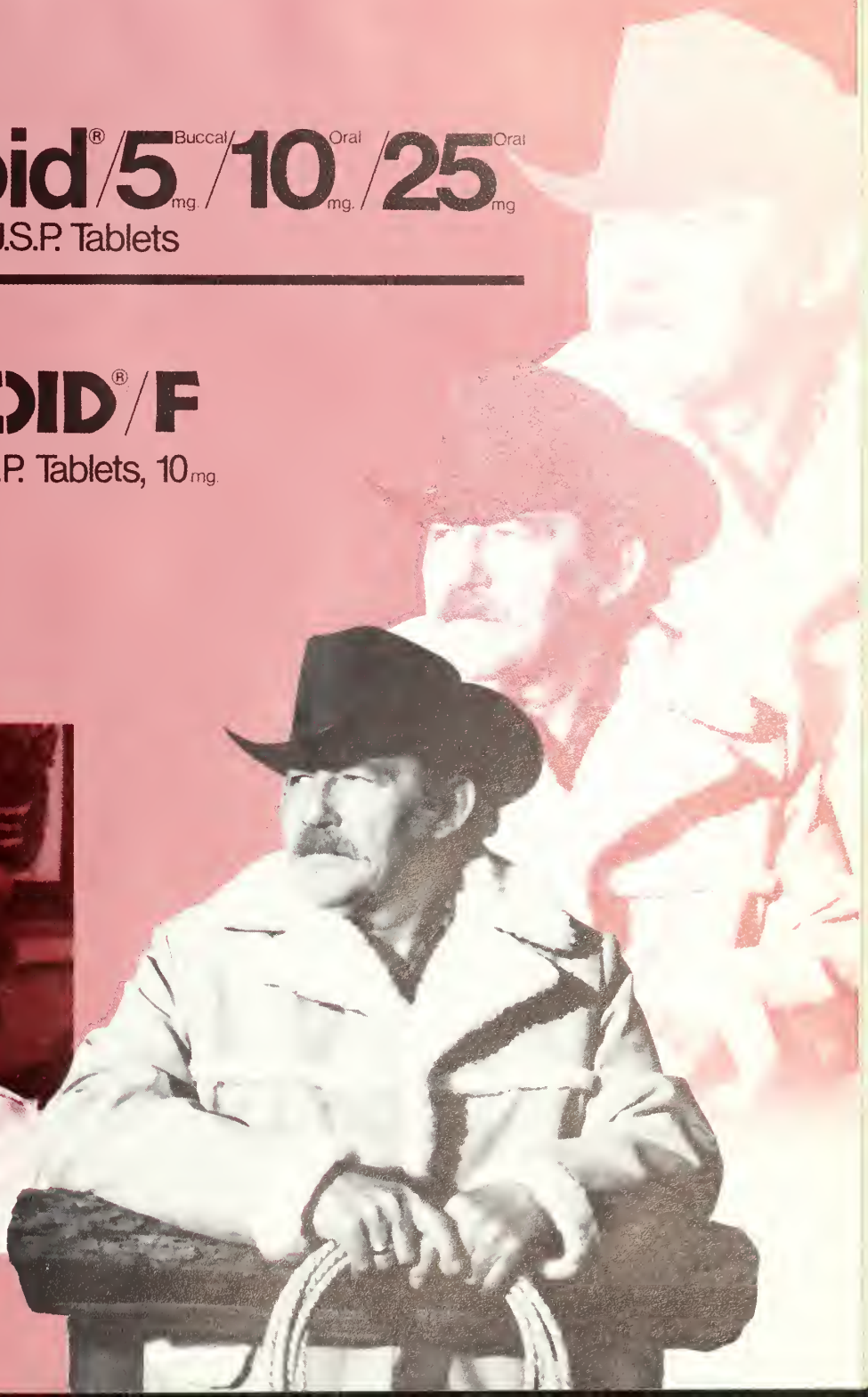
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CANCER CORNER

WILLIAM M. DUGAN, JR., M.D.
Clinical Oncology Center, Methodist Hospital of Indiana

PATIENT/FAMILY EDUCATION: The American Cancer Society sponsors an ongoing patient education series, "I CAN COPE." The next class is October 22 November 7, 1985 at the Northminster Presbyterian Church.

This program is for cancer patients and family members and is provided at no cost. The six-session series provides medical and practical information to assist both patient and family member in learning to understand and to cope with the chronic illness of cancer.

If you have any questions about the program or need brochures, please contact the American Cancer Society at 317-923-2225.

CAN CANCER BE PREVENTED? Yes! Some cancers can be prevented. Eighty-five percent of lung cancers are caused by cigarette smoking and most skin cancers by frequent over-exposure to direct sunlight. However, about 160,000 people with cancer who might have been saved by earlier diagnosis and prompt treatment will die in 1985. What can you do to help prevent cancer?

- Don't smoke or use tobacco in any form.
- If you drink alcoholic beverages, do so in moderation.
- Eat foods low in fat.
- Include fresh fruits, vegetables, whole grain cereals in your daily diet.
- Avoid unnecessary x-rays.
- Keep yourself safe on the job by using protective devices indicated by your job description and/or supervisor.
- Avoid too much sunlight, wear protective clothing and use a sunscreen.

ASSOCIATION OF COMMUNITY CANCER CENTERS (ACCC) NOMINATING COMMITTEE members were elected during the Annual ACCC meeting held in Washington D.C., March 13-17, 1985. Indiana has three members on this committee. They are David Johnson, president of Deaconess Hospital, Candace Adye, R.N., administrative coordinator of the Office of Oncology, Deaconess Hospital, Evansville, Indiana, and Dr. William Dugan, medical director of the Clinical Oncology Center, Methodist Hospital of Indiana, Inc., Indianapolis. Other committee members are Dr. Gail Katterhagen, member of the National Cancer Advisory Board and director of the Cancer Center in Tacoma, Washington and Thomas Tucker, professor of Health Administration at the University of Kentucky.

AMERICAN CANCER SOCIETY (ACS) 1985 edition of *Cancer Facts & Figures* is now available by calling your local ACS unit or the division office in Indianapolis (317-872-4432).

ASSOCIATION OF COMMUNITY CANCER CENTERS (ACCC) POINTS OUT THAT SEVERAL TYPES OF CANCER PATIENTS MAY BE THREATENED BY INADEQUATE REIMBURSEMENT FROM DIAGNOSIS RELATED GROUPS THAT ARE WEIGHTED TOO LOW. ACCC has been monitoring the impact of the Prospective Payment System (including DRGs) on the ability to assure cancer patients of adequate care.

ACCC research shows that three of the 72 DRGs that relate to cancer may be so significantly below the actual costs of care that many cancer patients may be threatened with inadequate care. These three DRGs (401, 403, and 410) appear to be consistently below the costs of patient care. Moreover, these DRGs are frequently used. The first one and the second are surgical and medical procedures with leukemia and lymphomas. ACCC's research shows that during the initial phase of chemotherapy, for example, hospitals are losing from $25,000 to $30,000 per admission. Hospital administrators are looking for ways to cut their losses, and patients who consistently generate this level of loss may be referred elsewhere. But who will take them? Even the medical schools and major community cancer programs cannot afford to treat all of the patients who are cost losers. ACCC believes that these patients deserve adequate care wherever their homes may be.

The other DRG, 410, is for in-hospital chemotherapy. Given its low rate of reimbursement, patients who were previously treated in the hospital are now being treated at home or in offices. This could be a positive step toward cost containment, but in many cases, patients who are hospitalized for chemotherapy are those who require drugs that are most difficult to handle and that require expert supervision. Most of the patients who are given chemotherapy are already seen and treated in offices and clinics. Only the truly sick patients with difficult chemotherapy remain, and now they are being forced to be treated in their homes. To add to the confusion, with some of these same drugs, the FDA insists that the patient be close to cardiopulmonary equipment (e.g., in the hospital when the drugs are administered).

ACCC recognizes that changes in the weights of DRGs are the province of the Prospective Payment Assessment Commission and the Health Care Financing Administration; but given HCFA's previous performance, ACCC hopes that Congress will monitor these three DRGs to assure that patient care does not suffer.



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PUBLIC HEALTH NOTES

Disease surveillance is one of the primary responsibilities of the State Board of Health. It includes the collection, tabulation, analysis, and reporting of data on the occurrence and distribution of disease.

When properly done, surveillance allows disease problems to be defined so that the most direct and definitive control and prevention measures can be implemented. The knowledge gained from disease surveillance is essential to the efforts of public health agencies, but it also is of real benefit to the private physician who cares for individual patients.

Several years ago, Phillip Brachman, M.D., of the Centers for Disease Control, wrote an article published in Postgraduate Medicine that discussed the relationship of disease surveillance to the private practitioner. It was stressed that there are several very important benefits of a surveillance program. One such benefit is its ability to alert the practicing physician to the occurrence of a specific disease in his or her area so that additional cases can be diagnosed early, specific treatment started without delay, and new cases prevented. Because the physician has knowledge that a particular disease is occurring, he is able to provide his or her patients with better care.

A second benefit of a surveillance program is that at times, it can guide the physician to the most appropriate therapy for a disease. This can occur, for example, when a certain pathogenic organism develops an unusual resistance pattern to antibiotics. Surveillance can provide information on this pattern of resistance to the physician so that he or she can start the patient on the appropriate antibiotic immediately after diagnosis is suspected.

Thirdly, a surveillance program can provide information necessary in order to make appropriate decisions regarding prophylactic treatment. Knowledge of rabies prevalence in an area is important in making decisions about postexposure prophylaxis.

Influenza surveillance data is essential in determining the antigenic composition of future influenza vaccines. Other benefits of disease surveillance include providing information so that hypotheses regarding disease etiology, prevention, and control can be tested, and so that changes in the epidemiology of certain diseases can be detected. Information from surveillance programs can allow governmental agencies to make informed decisions with respect to allocation of resources of disease control and prevention efforts.

The Key to Disease Surveillance Is the Private Physician

Private physicians are the key to surveillance; they are the primary source of the necessary information, and timely reporting on their part can allow in some instances prevention and control measures to be quickly instituted so that the occurrence of additional cases can be prevented.

An example of this happened two years ago when a physician reported a case of measles in a student at a large state university. This report triggered an investigation which uncovered further cases, leading to the initiation of a large scale immunization program at the school. The prompt reporting of the initial case by this private physician undoubtedly resulted in the prevention of a number of measles cases which otherwise would have occurred.

Another example happened about a year ago when a physician in the southern part of the state reported a case of tuberculosis to his local health department along with his observation that a larger tuberculosis problem might be present in his area.

Subsequent investigation by public health officials revealed additional TB cases, and control measures were instituted. Here, as in the previous example, a physician's prompt reporting of a communicable disease resulted in the prevention of new cases which otherwise would have occurred.

Surveillance starts with the practicing physician when he or she sees a patient and makes a diagnosis of a reportable disease. It continues as the case is reported to the local health department, which in turn reports the case to the State Board of Health. Here, data from throughout the state can be tabulated and analyzed and information disseminated back to private physicians.

In addition, disease reports are forwarded to the Centers for Disease Control where tabulation and analysis of data from throughout the nation can be undertaken. CDC also disseminates information and recommendations based on its analysis of the data. These recommendations (on such subjects as vaccines, rabies prophylaxis, and hepatitis prevention) are very useful, not only to public health agencies, but also to private physicians caring for individual patients.

In summary, disease surveillance is an integral part of the efforts of both public health agencies and individual physicians to control and prevent disease. Private physicians play an essential role in a surveillance program. Through their contribution to this effort, they serve not only themselves, but also their patients, the community, the state and the nation.

The requirement to report communicable diseases in Indiana is based on Communicable Disease Control Rule 410 IAC 1-2-2. A recent summary of this regulation was published in the Indiana Epidemiology Report. Physicians are encouraged to refer to this source for a complete description of reporting requirements. (All physicians should be receiving the Indiana Epidemiology Report each month; any physicians not currently on the mailing list can request this publication by calling the Chronic and Communicable Disease Control Division, AC 317/633-8414.)

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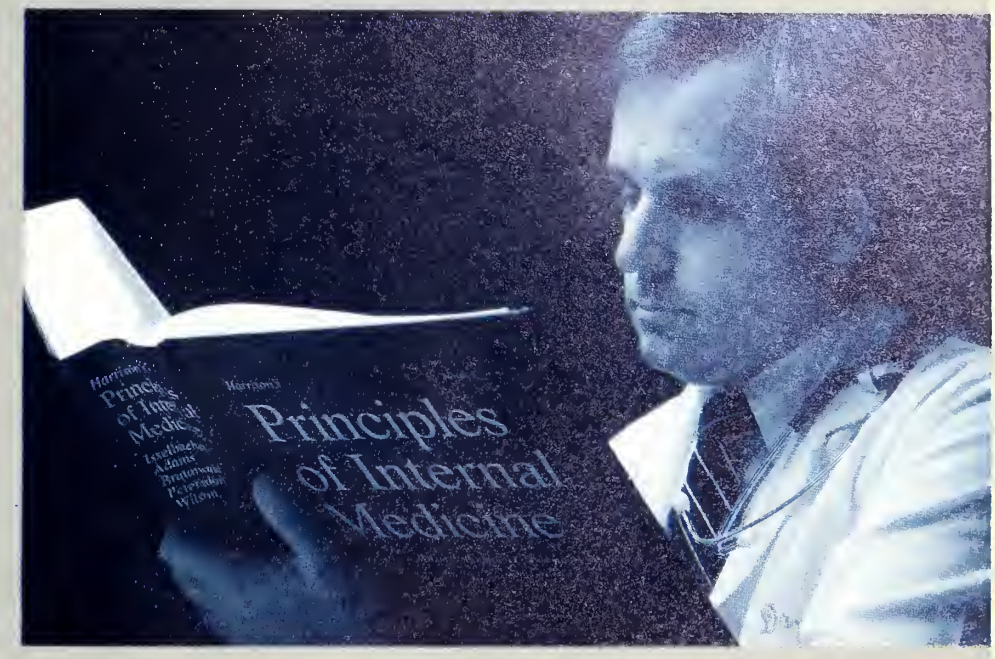
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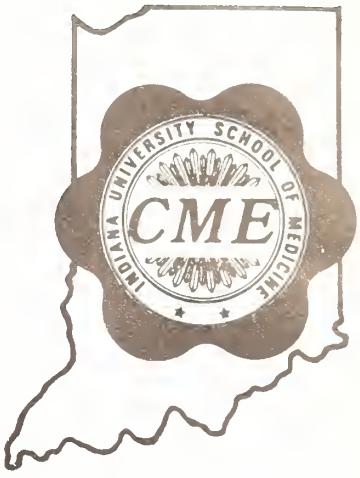
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The Chest Radiograph as a Screening Tool: A Reappraisal

WILLIAM M. TIERNEY, M.D.
ROBERT S. DITTUS, M.D.
Indianapolis

THE CHEST RADIOGRAPH is the most common radiographic examination performed in the United States, accounting for approximately 45% of all radiographs.[1] In 1980, there were 52 million radiographic examinations of the chest in United States hospitals, of which as many as 60% were performed for routine screening purposes.[2,3] This costs patients more than $750 million per year and does not include routine screening chest radiographs taken in physicians' offices or clinics. Thus, the cost of chest radiography is enormous and worth reconsidering in light of what information physicians gain for the cost incurred.

In 1979, the National Center for Devices and Radiological Health (NCDRH) commissioned the Radiological Health Sciences Education Project of the University of California, San Francisco, to convene the Chest X-ray Panel to evaluate the chest radiograph as a screening tool. The panel released its report in 1983, calling for sweeping changes in the use of chest radiography in clinical medicine.[2] In late 1984, the Food and Drug Administration, which contains the NCDRH, mailed a copy of the panel's recommendations to physicians throughout the United States. This article will discuss these recommendations and the medical literature upon which they are based.

Concepts of Screening for Disease

In 1968, the World Health Organization published a position paper on the principles of screening for disease.[4] Among the criteria that an adequate screening examination should meet were the following:

1. The condition being sought should be an important health problem in the person(s) being tested. Thus, a disease

From the Div. of General Internal Medicine, Dept. of Medicine, Indiana University School of Medicine, and the Regenstrief Institute for Health Care.

This work is supported in part by the National Center for Health Services Research, DHHS, under research grant number HS-04996.

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or condition should be reasonably prevalent and have important impact on health, functional status or financial situation.

2. There should be a recognizable latent or asymptomatic stage.

3. Treatment of the pre-clinical or asymptomatic stage should have a measurable effect on disease outcome. Finding an abnormality is of little importance if there is no effective treatment or if there is no cost involved, in terms of morbidity and functional status, with delaying treatment until the condition becomes symptomatic.

4. Facilities for diagnosis and treatment should be available, and the test should be acceptable to those targeted for testing.

5. The cost of case-finding (including the diagnosis and treatment of patients identified) should be economically balanced in relation to expenditures on health care as a whole.

When discussing the panel's recommendations, and the literature upon which they are based, we will take these principles into account. In addition, it is important to differentiate between the "positive" and "negative" results and the clinical usefulness of a test. "Positive" is not synonymous with useful. In a person with classic clinical findings of emphysema, a confirmatory radiograph adds little to the care of the patient. Similarly, a negative chest radiograph may have important therapeutic implications, as in the patient with cough and fever.

In the following sections, we will discuss the chest radiograph and its use in screening patients at the time of hospital admission, screening for cancer and tuberculosis, and screening mandated by societal forces.

Screening Patients on Admission to the Hospital

In 1974, Sagel and co-workers published a review of more than 10,000 consecutive chest radiographs obtained at the time of hospital admission.[3] Sixty percent of these were done as routine admitting radiographs, of which 16% were positive (i.e., showed some evidence of a possible serious abnormality). For comparison, of the 40% performed on patients with some suspicion of chest disease, 54% were positive. In those whose chest radiographs were obtained for screening purposes, 73% of the abnormalities found were suggested from information in the patients' hospital charts. Excluding patients with clinical evidence of cardiopulmonary disease, new radiographic findings were discovered on only 4% of screening chest radiographs, the major ones being cardiomegaly (53% of new abnormalities), and chronic obstructive lung disease (35%). When analyzed by age, abnormalities detected by screening ranged in prevalence from 1% in those less than 30 years old to 42% in those older than 70. (Prevalence is defined as the proportion of persons in a population who are affected at any one time.)

Chest radiographs have also been routinely performed for the pre-operative evaluation of operative risk. In 1976, Rees, *et al.* collected data on 667 routine chest radiographs on patients undergoing non-cardiopulmonary surgery in Great Britain.[5] Nineteen percent of these showed some abnormality, the major ones being cardiomegaly in 54% and chronic obstructive lung disease in 13%. No significant abnormalities were found in patients less than 30 years old, who accounted for 16% of all patients. In 1983, Rucker and colleagues evaluated screening pre-operative chest radiographs in 905 patients.[6] They found only one abnormality in 401 patients who had negative answers to all questions on a checklist searching for evidence of cardiopulmonary disease from the clinical history and physical examination. In the remainder, who had one or more positive answers, the yield was 22%.

Again, one must not equate "positive" with "useful." In 1985, Hubbel and co-workers reported on 294 patients undergoing routine chest radiography on admission to a Veterans Administration hospital, whose prevalence of radiographic abnormalities was high (36%).[7] Of the abnormalities found, all but 20 (19%) were previously known, chronic and stable. Of the 20 patients with new findings, only 12 had their hospital courses altered because of the findings, and in only one patient would the appropriate treatment have been omitted were the radiograph not taken, and that patient's outcome was not improved by the treatment.

Several conclusions can be reached from these studies. The yield of abnormalities found on routine screening chest radiographs at the time of hospital admission is low, 17 to 36%, much lower in patients with no clinical evidence of cardiopulmonary disease, and increases dramatically with age. Moreover, finding abnormalities has little effect on physician behavior and even less on patient outcomes. On the basis of this information, the NCDRH Chest X-ray Panel recommended not obtaining a chest radiograph solely because of hospital admission. Chest radiographs should only be performed on those patients with symptoms or a worrisome history, and then only if the physician plans to intervene if the abnormality sought for is found.

Screening for Lung Cancer

Lung cancer clearly meets the first two of the WHO criteria for screening: It is an important cause of morbidity and mortality in the United States,[8] and there is a long asymptomatic stage during which lung cancer may be curable. Moreover, the chest radiograph is the best, if not only, means for early detection of lung cancer. The necessary criterion that chest radiography must meet to qualify as an adequate screening test is for treatment of the asymptomatic state to have an actual effect on patient survival. This has been evaluated in two clinical trials.

In 1968, Brett, *et al.* reported on a prospective trial of 54,460 factory employees in Great Britain who were randomly assigned to receive chest

radiographs every six months or usual care.[9] Lung cancer was found in 0.44% of study patients and 0.38% of control patients. When cancer was found, it was operable significantly more often in the study group (44 vs. 29%), but the annual mortality rate from lung cancer for the study group was 0.7% compared with 0.8% in the control group, a difference that was neither statistically nor clinically significant.

In 1971, Melamed and co-workers began a cancer detection program for men in New York City which included initial and annual chest radiographs for all enrollees plus sputum cytologic examinations for a randomly selected half of them.[10] After five years, more than 6,600 men had been enrolled. A total of 26 primary lung cancers were detected, 11 classified as "early" (three in the group that underwent chest radiography only, and eight in those also getting cytologic examinations), and 15 were classified as "late" (eight and seven in the two groups, respectively). Thus, routine screening for cancer identified only 11 possibly curable patients with lung cancer in more than 6,600 patients, a prevalence rate of less than two per thousand patients. Since many of these patients had more than one chest radiograph taken, the actual rate per radiograph was even less. Moreover, national statistics would suggest that many of those with "early" cancers will ultimately succumb to their malignancy.

On the basis of these and other studies, none of which have shown an effect on overall lung cancer mortality, the American Cancer Society in 1980 changed its former policy and recommended that routine chest radiography for screening of asymptomatic persons for lung cancer be discontinued, and the NCDRH panel agreed.

Tuberculosis Detection

In the 1940s and 1950s, mass miniature radiography was extensively used to screen asymptomatic persons for evidence of tuberculosis.[11] This extensive testing was justified by reasoning strongly supported by the WHO criteria for screening: Tuberculosis was a significant public health problem, leading to increased neonatal mortality and death and disability in adults; effective treatment (isoniazid) had just become available and was inexpensive with minimal side effects; and the disease had a long asymptomatic course during which intervention positively affected the course of the infection. In New York State alone, more than 2 million persons were screened by such programs.[11]

However, the yield of such mass chest radiography was found to be low, no more than one case of tuberculosis in 10,000 radiographs taken, and the cost of such screening was high.[12,13] Subsequently, skin testing has replaced chest radiography as the screening test of choice because of its low cost and high sensitivity even for the latent presymptomatic state, without the risks of repeated exposure to ionizing radiation.

In a recent review, Lordi and Reichman discussed the value of the chest radiograph in follow-up of patients with evidence of infection with M. tuberculosis.[14] Although they agreed with the current practice of obtaining an initial chest radiograph on all persons with positive tuberculin skin reactions, they could find no evidence supporting yearly chest radiographs in such patients regardless of whether or not treatment with isoniazid was undertaken. Likewise, they could find no evidence supporting repeated chest radiography in asymptomatic institutionalized patients, health care workers, and patients who have completed a course of therapy for active or latent disease. In response to these data, the American Thoracic Society has adopted tuberculin skin testing as the screening test of choice and has recommended, "In tuberculosis control programs, screening should be given much lower priority than management of patients and contacts."[15]

Mandated Routine Screening Chest Radiography

When routine screening chest radiography was instituted for identifying patients with tuberculosis, it was also used for screening for other diseases (e.g., cancer). Eventually, mandated screening chest radiographs were required by many institutions: hospitals, industry, government, and other places of employment; schools and the military; and even prenatal examinations.[2] These examinations were motivated by the desire to identify disease in apparently healthy individuals to increase cure rate, avoid more costly medical care of the active disease, and reduce epidemic spread. Although tuberculosis was originally endemic, effective treatment has caused a dramatic fall in its prevalence. This, along with the advent of skin testing, makes the original goal of mandated chest radiographic screening inappropriate. Moreover, the yield for other abnormalities has not been great enough for routine screening radiography to meet the WHO criteria.

Because of the high cost and extremely low yield of treatable abnormalities by screening with chest radiography in the workplace, institutions, and the general population, the NCDRH Chest X-ray Panel has recommended the discontinuation of all mandated routine screening examinations except where clinical data show a significant prevalence of treatable diseases in those being screened and in those with symptoms suggestive of cardiopulmonary pathology.

Discussion

In 1984, Epstein, *et al.* reported that physicians in the United States order almost seven times as many chest radiographs as their counterparts in Great Britain.[16] This, along with the current atmosphere of fiscal restraint, forces the medical community to re-evaluate the benefit being reaped from such extensive use. Physicians have used such ancillary testing to "rule out disease" and assure that a patient is in-

deed healthy despite the lack of clinical symptoms or factors that place a particular patient at inordinate risk. However, the yield of such testing in terms of the alleviation of suffering and prolongation of life has been disappointing for many tests, including screening chest radiography. Screening chest radiography has been expensive and not without risk: There is evidence from epidemiologic studies that the risk to the individual of malignancy from low-dose ionizing radiation, even in the one rad range, may be higher than previously estimated.[17,18] Even if the risk is low, exposure of large numbers of persons to low doses of radiation from radiologic screening procedures outweighs the benefits reaped from screening those at extremely low risk of disease.

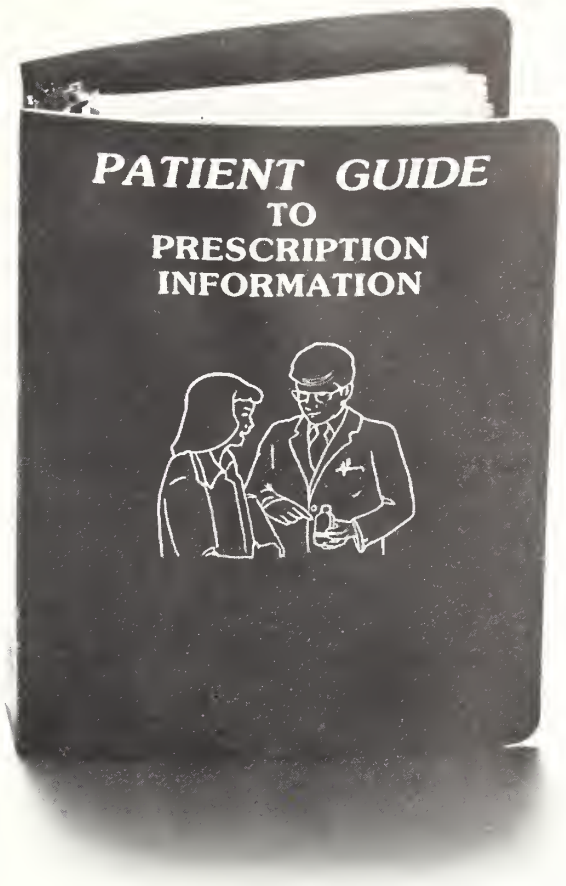
Thus, chest radiography should not be done as a routine screening procedure for tuberculosis, cancer, or other diseases in asymptomatic persons not known to be at increased risk. For those who are at risk, it should be compared with the costs and benefits of other methods of screening (the physical examination, skin testing, etc.), and even then it should be performed only if the physician plans to act if an abnormality is identified.

REFERENCES

1. Population exposure to x-rays. Dept. of Health, Education, and Welfare, Bureau of Radiologic Health, Publication (FDA) 73-8047. Rockville, Md., 1973.
2. Chest x-ray examinations. Dept. of Health and Human Services, Publication (FDA) 83-8204, 1983.
3. Sagel SS, Evens RG, Forrest JV, Bramson RT: Efficacy of routine screening and lateral chest radiographs in a hospital-based population. *N Engl J Med*, 291:1001-04, 1974.
4. Wilson JMG, Jungner G: Principles and practice of screening for disease. *Publ Health Papers*, 34:15-39, 1968.
5. Rees AM, Roberts CJ, Bligh AS, Evans KT: Routine pre-operative chest radiography in non-cardiopulmonary surgery. *Brit Med J*, 1:1333-35, 1976.
6. Rucker L, Frye EB, Staten MA: Usefulness of screening chest roentgenograms in preoperative patients. *JAMA*, 250:3209-11, 1983.
7. Hubbell FA, Greenfield S, Tyler JL, *et al*: The impact of routine admission chest x-ray films on patient care. *N Engl J Med*, 312:209-12, 1985.
8. Silverberg E: Cancer statistics, 1985. *CA*, 35:19-56, 1985.
9. Brett GZ: The value of lung cancer detection by six-monthly chest radiographs. *Thorax*, 23:414-20, 1968.
10. Melamed M, Flehinger B, Miller D, *et al*: Preliminary report of the lung cancer detection program in New York. *CA*, 39:369-82, 1977.
11. Siegal WS, Plunkett RE, Locke BZ: Case findings from routine chest roentgenograms. *JAMA*, 157:435-44, 1955.
12. Fleck AC, Hilleboe HE, Smith GE: Evaluation of tuberculosis casefinding by mass small film radiography. *Public Health Rep*, 75:805-13, 1960.
13. Swallow J, Sbarbaro JA: Analysis of tuberculosis casefinding in Denver, Colorado, 1965-70. *Health Service Rep*, 87:375-84, 1972.
14. Lordi GM, Reichman LB: Tuberculosis: When not to order roentgenograms. *JAMA*, 253:1780-81, 1985.
15. American Thoracic Society: Control of tuberculosis. *Am Rev Respir Dis*, 128:336-46, 1983.
16. Epstein AM, Hartley RM, Charlton JR, *et al*: A comparison of ambulatory test ordering for hypertensive patients in the United States and England. *JAMA*, 252:1723-26, 1984.
17. Bross IDJ, Ball M, Falen S: A dosage response curve for the one rad range: Adult risks from diagnostic radiation. *AJPH*, 69:130-36, 1979.
18. BIER Report: The effects on populations of exposure to low levels of ionizing radiation. *The National Academy of Sciences*, Washington, DC, 1972.

PATIENTS NEEDED FOR DIABETES RESEARCH STUDY

The Diabetes Research and Training Center, Indiana University School of Medicine, is seeking patients for studies with an experimental aldose reductase inhibitor to determine if this drug will prevent or retard the development of diabetic retinopathy. Aldose reductase inhibitors work by preventing the accumulation of sorbital in tissues including the lens, nerves and retina. They have already been found to prevent metabolic cataracts and to improve diabetic neuropathy in experimental trials. Since the retinal cells accumulate sorbital, this trial is designed to determine if the administration of the drug would prevent retinopathy or retard its progress. The drug is experimental and although no serious side effects have been found, this study will require close follow-up for one to two years. The potential benefit for patients would be close follow-up of their diabetes and retinopathy including retinal photographs and the possible prevention of a serious and disabling complication of diabetes. The trial is in a double-blind format. Otherwise healthy patients with either type I (juvenile) or type II (adult) diabetes are being sought. Patients either without retinopathy or with nonproliferative retinopathy would qualify. Patient referral may be made by calling or having the patients call the Diabetes Center at (317) 630-6374.



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Maternal Mortality in Indiana: A Report of Maternal Deaths in 1983

WILLIAM D. RAGAN, M.D.
Indianapolis

The following is the annual report of the Indiana Maternal Mortality Study Committee. A total of four maternal deaths occurred in 1983. That year Indiana recorded 80,777 live births. This gives the state an official maternal mortality rate of 4.9 deaths per 100,000 births for 1983.

The committee met in open session at Grand Rounds at Wishard Memorial Hospital on June 6, 1984. A summary of the 1982 deaths was presented. Six maternal deaths that involved the "Faith Assembly" group over the past five years were presented. Dr. Craig Spence gave his paper entitled, "The Faith Assembly: A Study of Perinatal and Maternal Mortality."[1] Material involving maternal death associated with ovarian vein thrombosis was presented.

The committee adjourned to the Student Union Building for a review of the four 1983 cases. Each case was presented for discussion, establishment of diagnosis, and assignment with regard to preventability and responsibility.

Case #756 was a 24-year-old, G2, P1, at 10 weeks gestation. Cause of death was hemorrhage secondary to a ruptured left tubal pregnancy. The death was considered obstetric and preventable.

Case #757 was a 23-year-old, G1, P0, at 27-28 weeks gestation. Death resulted from cerebral hemorrhage secondary to a cerebral arterial venous malformation. The death was considered an indirect maternal death and not preventable.

Case #758 was a 24-year-old white female, G2, P2, who was three days post-cesarean section. Diagnosis was pulmonary embolus. The death was considered obstetric and not preventable.

Case #759 was a 33-year-old, G4, P3, at 40 weeks gestation. Cause of death was cerebral vascular accident secondary to an astrocytoma. The case was considered an indirect death and not preventable.

Maternal mortality is still with us. While the numbers are small the committee feels it is important to investigate and report these deaths for statistical and educational purposes. Undoubtedly, there are many "near misses." According to our records 50% to 75% of these deaths are preventable or have preventable factors. Nationwide and locally, we are seeing an increased number of ectopic pregnancies. This may well result in increased maternal mortality. With the more liberal use of cesarean section we are seeing an increase in morbidity and on occasion mortality.

There is now a collaborative effort on the part of the American College of Obstetricians and Gynecologists to summarize maternal deaths by states and districts. These increased numbers will provide more meaningful statistics to continue to curtail preventable maternal mortality.

Dr. Ragan is chairman of the Indiana Maternal Mortality Study Committee.

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Publication supported in part by a grant from the Indiana State Medical Association.

REFERENCES

1. Spence C, Danielson TS, Kaunitz AM: The Faith Assembly: A study of perinatal and maternal morality. *Indiana Medicine*, 77:180-183, 1984.
2. Ragan WD: Maternal mortality in Indiana: A report of maternal deaths in 1982. *Indiana Medicine*, 77:686, 1984.

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Pediatric Epiglottitis: A Review of 34 Patients



PEDIATRIC
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BASIC PRINCIPLES of pediatric epiglottitis presentation and management were described in last month's INDIANA MEDICINE. Epiglottitis in children is a life-threatening cause of upper airway obstruction that requires immediate recognition and airway establishment. We evaluated our experience with this disease at Methodist Hospital of Indiana Inc., during an eight-year period from 1977 through early 1985.

Methods

The charts of all patients less than 18 years of age admitted from January 1977 through April 1985 with an admitting and/or discharge diagnosis of epiglottitis were reviewed. A standardized data collection form (B.J.R.) was used to record demographic information, admission history and physician exam findings, laboratory and x-ray results, operating room (OR) and pediatric intensive care unit (PICU) management, and outcome including morbidity and mortality.

Results

The charts of 37 patients with a presumptive diagnosis of epiglottitis were reviewed. At OR evaluation three patients received a diagnosis other than epiglottitis. One patient had severe laryngotracheo-bronchitis (viral croup), and two had staphylococcal bacterial tracheitis,[1] one of whom required an artificial airway. Thirty-four pediatric patients with a diagnosis of epiglottitis were managed during this period, 12 from 1977-1982 and 22 from 1983 through April 1985.

Average patient age was 3 years, with a range of 8.4 months to 7 years. Admission temperature averaged 102°. Three patients were afebrile with temperatures less than 99°. The average time from onset of any symptom or sign to emergency room (ER) presentation was 22 hours. One patient had been ill only 30 minutes prior to arrival while another had been ill for five days with upper respiratory symptoms. This patient acutely worsened during the 24 hours prior to admission.

At least 85% of patients presented with a typical history of stridor, sore throat, and drooling and physical exam of stridor, retractions, and drooling (*TABLE*; when total number is less than 34, the information was not specifically documented). Cyanosis was documented in 13 of 24 patients at admission, indicating advanced and in some cases total airway obstruction. Twenty-five of 29 patients had a general appearance described as anxious, lethargic, or unresponsive, again indicative of extreme airway obstruction and the need for urgent airway establishment.

Lateral neck x-rays were obtained in 30 cases. Twenty-eight x-rays supported the clinical diagnosis of epiglottitis and two were equivocal. The two patients with equivocal x-rays were taken to the OR for definitive diagnosis and management. Blood cultures were positive in 21 of 28 cases, all for

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Hemophilus influenzae type b. Several patients received intravenous antibiotics prior to blood culture.

Of 34 patients with a definitive epiglottitis diagnosis, 32 were initially intubated and two required tracheostomy acutely in the ER. Three intubated patients subsequently underwent tracheostomy, one in a referral hospital prior to transfer, one for severe concomitant lower airway disease and inability to ventilate, and one for subglottic edema and early stenosis after four days of intubation. Nearly all patients managed in the OR were intubated orally after an inhalation induction with oxygen and halothane. The orotracheal tube was then changed to a nasotracheal tube for easier maintenance in the PICU.

Most patients required only humidified oxygen via T-piece or occasionally mist tent. Seven required either mechanical ventilation or continuous positive airway pressure (CPAP) for concomitant lung disease (see below). The endotracheal tube was tolerated in the PICU without sedation in 62% of patients. Only one inadvertent extubation occurred (12 hours after intubation) and the airway was immediately reestablished without sequelae.

Considerations for when to extubate included duration of intubation and antibiotic therapy, presence or absence of an air leak around the endotracheal tube, temperature, and improvement in clinical appearance. When resolution of obstruction and ability to tolerate extubation was in doubt, direct visualization by fiberoptic or direct laryngoscopy was performed in the PICU or OR. Twenty patients were extubated in the PICU and none required reintubation.

For all patients the average time for needing an artificial airway and for hospital stay was 4.4 and 7.8 days; for the more typical patient who didn't require mechanical ventilation or tracheostomy, 2.8 and 5.9 days.

Subsequent to airway establishment, an atypical course was noted in the following patients. One patient who required emergency room tracheostomy developed tracheal granulation tissue and web formation. He was successfully decannulated at a later admission. Another patient intubated for four days developed subglottic edema and early stenosis requiring tracheostomy. She was successfully decannulated 13 days after admission. A patient with Down's syndrome, a history of frequent upper respiratory tract infections, and atelectasis was successfully extubated on the third attempt following nine days of intubation. Four patients developed pulmonary edema associated with relief of upper airway obstruction (see below). Three of these patients developed severe adult respiratory distress syndrome requiring high levels of positive airway pressure and complicated by pneumothoraces. One of these three died two days after admission.

Discussion

The presentation and management of most patients in this series was typical for pediatric epiglottitis as discussed in last month's INDIANA MEDICINE (August 1985). However, not all patients in our series presented clas-

TABLE

	Frequency/ Total #	%
History		
Stridor	27/29	93
Sore throat	20/22	90
Drooling	21/24	87
Physical Exam		
Stridor	33/34	97
Retractions	30/32	93
Drooling	18/21	85
Cyanosis	13/24	54
Appearance		
Anxious	11/29	38
Lethargic	11/29	38
Calm	4/29	14
Unresponsive	3/29	10
Laboratory Data		
Abnormal lateral neck x-ray	28/30	93
Positive blood cultures	21/28	75
Initial Airway		
Intubation	32/34	94
Tracheostomy	2/34	6
PICU Management		
T-piece/croup tent	25/32	78
CPAP/mechanical ventilation	7/32	22
Chest physical therapy	6/29	21
Sedation	13/34	38
Extubation Procedure		
PICU	20/34	59
OR	10/34	29
Ward Tracheostomy decannulation	3/34	8
Direct visualization	16/34	47
No visualization	18/34	53

sically. Three were afebrile at the time of ER presentation despite the presence of invasive Hemophilus influenzae type b disease. A normal temperature does not rule out the diagnosis of epiglottitis. While most patients are ill for hours prior to presentation, symptoms for minutes (30) to days (5) may occur. While stridor and a five-day history of upper respiratory tract symptoms suggests viral croup, epiglottitis still should be considered. Cyanosis was present at admission in more than half of the patients, whether from advanced airway obstruction or increased lung water and ventilation/perfusion mismatch.[2] Oxygen administration should be attempted as long as it doesn't cause an increase in anxiety and respiratory distress.

Emergency room lateral neck x-rays supported a diagnosis of epiglottitis in all patients taken to the OR and found to have epiglottitis. Two patients with equivocal x-rays were evaluated in the OR because of severity of respiratory distress and need for definitive diagnosis. If history and presentation is typical for epiglottitis or if distress is severe, a lateral neck x-ray may delay lifesaving airway establishment, ideally performed in the OR. Lateral neck x-ray may be helpful in establishing a diagnosis in the nondistressed patient with an atypical presentation.

Hemophilus influenzae type b was the causative organism in every case in which blood cultures were positive. While initial antibiotic choice and dose is straightforward, the need for rifampin for the prevention of secondary cases of invasive Hemophilus influenzae type b disease must be considered. Both index case and contacts may require rifampin.[3]

Our results support the use in this hospital setting of initial nasotracheal intubation rather than tracheostomy as the airway of choice. All patients taken to the OR were able to be intubated. This approach requires immediately available surgery and anesthesiology staff and intensive care unit personnel comfortable with maintaining the pediatric airway. Shorter airway duration and hospital stay is typical with nasotracheal intubation. Tracheostomy or the decision to attempt rapid transport are alternatives depending upon personnel availability and hospital capabilities.

Only 38% of our patients required sedation to lessen the possibility of inadvertent extubation, which occurred only once. Children were constantly attended, read to, and calmed by nurse or parent, and were encouraged to watch television, play games, etc. The older children especially seemed to understand the importance of their airway. It should be noted that not all patients were afebrile at the time of extubation. Absence of fever is not an absolute criteria for deciding to extubate.[4]

Our worst morbidity and single mortality was the result of pulmonary edema (and subsequent adult respiratory distress syndrome) which may complicate epiglottitis either before or after artificial airway placement.[5-9] Multi-factorial in etiology, the end result is pulmonary edema from an increase in pulmonary capillary hydrostatic pressure and from increased pulmonary capillary permeability. The basic management of this complication has been described.[10]

A concluding note of thanks to our ER and anesthesiology colleagues for their help and expertise in managing this difficult pediatric problem, and also to the PICU nurses and residents for their superb care and concern.

REFERENCES

1. Liston SL, *et al*: Bacterial tracheitis. *Am J Dis Child*, 137:764, 1983.
2. Costigan DC, *et al*: Respiratory status of children with epiglottitis with and without an artificial airway. *Am J Dis Child*, 137:139, 1983.
3. Committee on Infectious Diseases, American Academy of Pediatrics: Revision of recommendations for use of rifampin prophylaxis of contents of patients with Haemophilus influenzae infection. *Pediatrics*, 74:301, 1984.
4. Rothstein P, Lister G: Epiglottitis: Duration of intubation and fever. *Anesth Analg*, 62:785, 1983.
5. Stool SE, *et al*: Pulmonary edema following relief of acute upper airway obstruction. *Ann Otol*, 89:124, 1980.
6. Travis KW, *et al*: Pulmonary edema associated with croup and epiglottitis. *Pediatrics*, 59:695, 1977.
7. Soliman MG, Richer P: Epiglottitis and pulmonary edema in children. *Canad Anaesth Soc J*, 25:270, 1978.
8. Lee SC, *et al*: Epiglottitis presenting as acute pulmonary edema. *Ann Emer Med*, 14:60, 1985.
9. Kanter RK, Watchko JF: Pulmonary edema associated with upper airway obstruction. *Am J Dis Child*, 138:356, 1984.
10. Nugent SK: Adult respiratory distress syndrome in a pediatric patient. *Indiana Medicine*, 78:104, 1985.

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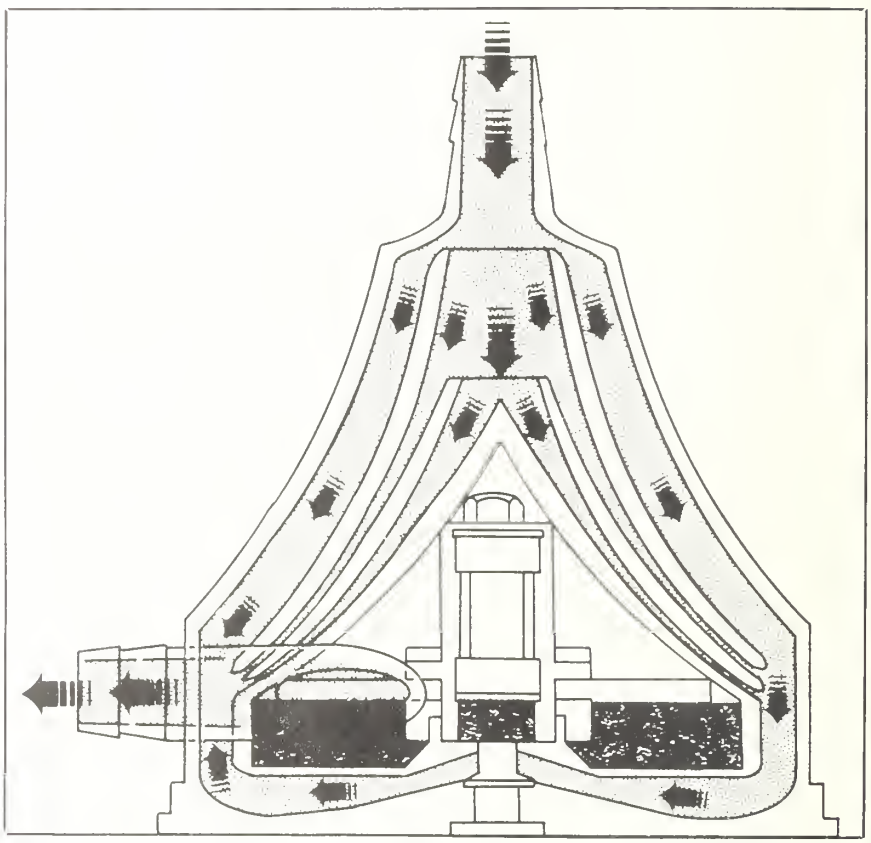
HARRY SIDERYS, M.D.
DAN BECKMAN, M.D.
Indianapolis

ONE LESSON LEARNED early in cardiac surgery and also in performing CPR is that hearts that appear to be refractory to all attempts at resusitation after an acute insult, might, if supported long enough, return to a satisfactory functional state. The term "Stunned Heart" has been recently coined to describe such a heart.[1]

After heart surgery, if cardiac function is mildly or moderately depressed, cardiotonic drugs and then an intra-aortic balloon may be used. With severe cardiac malfunction these two aides may not be enough, and one may have to leave the patient on bypass for a prolonged period of time hoping for some return of function. The problems associated with prolonged cardiopulmonary bypass are almost insurmountable and include uncontrolled bleeding and destruction of blood elements.

Most of the time, cardiac dysfunction is left ventricular dysfunction, and bypassing just the left ventricle is adequate to sustain the patient—hence the term, left ventricular assist device (L.V.A.D.).

A recent innovation, which is called the Vortex pump (*Figure*), is more gentle on the blood elements and pump tubing, and allows bypass of the left heart for prolonged periods with minimal anticoagulation.



CROSS-SECTIONAL DIAGRAM of the Vortex pump. Blood enters the top and spills over and through the rapidly rotating cones. Blood exists through a lower part with enough force to maintain systemic arterial pressure.

Case Report

The patient is a 35-year-old man admitted to Methodist Hospital for unstable angina with orthopnea and paroxysmal nocturnal dyspnea. He had congenital hypercholesterolemia and had a triple coronary bypass operation in 1977. He had done well until recent months and a cardiac catheterization showed his mammary artery graft to his anterior descending artery was patent, but his vein grafts to his right and circumflex arteries were occluded. He had moderately severe left ventricular dysfunction. In January 1985, he had a vein graft placed to his right and circumflex coronary arteries with good in-

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traoperative flows. As his sternum was being wired his heart unexpectedly arrested and did not respond to massage or drug therapy. We went back on bypass, placed the intra-aortic balloon and made repeated unsuccessful attempts to come off bypass. When it was apparent that other measures would not work, we instituted left heart bypass using the Vortex pump. A cannula was placed in the left atrium and another in the aorta. Ordinary tubing was used to guide blood from the left atrium, through the Vortex pump and then back to the aorta. With this bypass flowing, we were able to come off the heart-lung machine, neutralize the heparin with protamine and send the patient back to the recovery room.

With this left heart bypass functioning, the patient remained physiologically stable and had good urine output. He was extubated on the fourth postoperative day. On the seventh day after surgery, he was taken back to surgery and the L.V.A.D. pump was turned off, and the cannulas were removed. The next day his intra-aortic balloon was removed and over the next two weeks he regained his strength, and was able to go home. Nuclear medicine tests prior to his discharge indicated that his left ventricular function was better than preoperatively.

Discussion

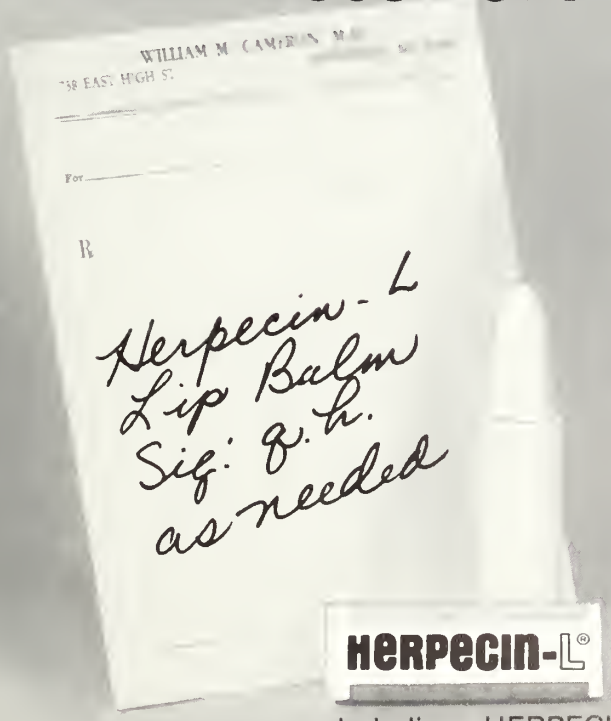
Rarely after cardiac surgery does cardiac function deteriorate to the point that cardiotonic drugs and the intra-aortic balloon together cannot wean the patient from the heart-lung machine. Some of these hearts are stunned, and if they could be supported for days, they would return to more normal function. The Vortex pump facilitates left or right heart bypass, or both.

Mechanical support of the stunned heart will have an increasingly important role in the future.

REFERENCE

1. Braunwald E, Kloner RA: The stunned myocardium: Prolonged, post-ischemic ventricular dysfunction (editorial). *Circulation*, 66:1146, 1982.

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PHYLLIS MYER, R.N.[1]
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Abstract

A 5-month-old child was seen in the emergency room with tachycardia and bizarre neurological behavior. The child had been under treatment for possible otitis media with injectable penicillin, oral trimethoprim-sulfamethoxazole, acetaminophen and an oral decongestant, antihistamine and antitussive product. The child was admitted to the acute care facility because of bizarre writhing of all extremities, arching of head and back and extreme irritability. After sedation with phenobarbital and later diazepan, the child progressed well and was discharged three days later. The symptoms were attributed to the combination decongestant, antihistamine, and antitussive product. Specifically, the symptoms would appear to result from cumulative doses of the decongestant and/or a paradoxical reaction to the antihistamine. The toxicities of these combination ingredients are reviewed and suggestions advanced regarding proper use of these "cold" products in pediatric patients.

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Case Report

A 5-month-old male infant was admitted to a local hospital with presenting symptoms of restlessness, irritability and fever. Three days before admission the infant was seen by his local physician and begun on Rondec DM syrup, 1/4 tsp. every four hours for cough and rhinorrhea. One day prior to admission he was seen again with a temperature of 103 degrees and irritability. The local physician made an additional diagnosis of otitis media. The infant received an injection of 60,000 units of benzathine penicillin and prescriptions for an oral trimethoprim-sulfamethoxazole (one teaspoonful twice a day) and acetaminophen drops (every four hours for fever). The mother was instructed to continue the Rondec DM every four hours. On the day of admission the infant was referred for possible meningitis. The child had received a total of 18 doses of Rondec DM syrup, one dose of trimethoprim-sulfamethoxazole, eight doses of acetaminophen drops and an injection of benzathine penicillin.

Physical examination revealed an ashen grey dehydrated infant with poor skin turgor. The child's temperature was 105 degrees, pulse 240 beats/minute, respiratory rate of 64/minute, blood pressure of 80/40 mm Hg., and a weight of 5.04 Kg (11 lbs.). His mother reported that he weighed 5.9 Kg (13 lbs.) three days prior to his admission. The infant was exhibiting a bizarre behavior pattern of writhing of all extremities, extreme arching of the head and neck, and marked irritability. His fontanelle was soft. The pupils were dilated and fixed. The neck was supple with no nuchal rigidity. His left tympanic membrane was injected. The mucous membranes were dry. The chest was clear to auscultation. No murmurs were noted. The abdomen was soft, with no masses, and no organomegaly. The infant appeared to be in a hyperirritable state; any touch, movement, light, or noise would elicit extreme writhing behavior and shrill cry.

Significant laboratory findings were as follows: hemoglobin 10.9 g/dl, hematocrit 32.7 and total WBC count of 8,600/ul. Urinalysis revealed a pH of 6, specific gravity of 1.030, 1+ sugar, and 3+ ketones. The blood pH was 7.35, pC02 45.6 mm Hg, HC03 24.4 meq/l, sodium of 157 potassium of 4.3, and chloride of 119. A lumbar puncture revealed a glucose of 87, protein of 29, WBC of 9 and a RBC of 7. Blood cultures and spinal fluid cultures were negative for bacterial organisms. A chest x-ray was normal. An EKG revealed sinus tachycardia.

Management

The infant was extremely combative and irritable with a low threshold to

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any stimuli. A bolus of 100cc of Ringers Lactate was given followed by Plasmalyte 56 in 5% Dextrose Water at 40cc/hr. Phenobarbital 32.5 mg was administered I.V. for sedation. No diminution of hyperirritability was noted 30 minutes after the dose and a second dose of 32.5 mg was administered. The bizarre behavior continued and 1 mg of diazepam was administered intravenously. Sedation was noted 20 minutes after the administration of the I.V. diazepam. Phenobarbital (32.5 mg/dose) was again administered I.V. at eight and 12 hours after admission for agitation.

Two hours after admission the child's heart rate decreased to 150 beats/minute. The respiration rate was sustained at 50/minute. Twenty-four hours after admission the child's temperature returned to normal and the pupil reflex was normal. He was less irritable and his agitation less pronounced. His weight increased to 5.40 Kg. after rehydration. Forty-eight hours after admission he was alert with normal behavior. His pulse was 110 beats/minute, respiratory rate was 32/minute, blood pressure of 84/42 mm Hg, and weight was 5.90 Kg. He was discharged on the third day.

Discussion

Rondec DM™ is a combination antihistamine, decongestant and antitussive product marketed by Ross Laboratories. The product is available as a syrup and as liquid drops. The product is a prescription item and cannot be purchased over the counter. The FDA-approved indications for the product are: symptomatic relief of the common cold, nasopharyngitis with post nasal drip, bronchitis and related respiratory conditions.[1] The ingredients within Rondec DM Syrup are as follows:

Carbinoxamine maleate	4 mg/5 ml
Pseudoephedrine hydrochloride	60 mg/5 ml
Dextromethorphan hydrobromide	15 mg/5 ml

The recommended dosage for Rondec DM™ syrup is 2.5 ml QID for children 1½ to 6 years and 5 ml for adults and children 6 years and older. The total of doses administered and the total mg/Kg dose in this child are listed in the *Table*.

TABLE
Total Dose Administered in Case

Active Ingredients of Rondec DM Syrup*	Total of Doses Administered (mg/Kg)
Carbinoxamine maleate (4 mg/5 ml)	18 mg. (3.6 mg/Kg)
Pseudoephedrine hydrochloride (60 mg/5 ml)	270 mg. (51 mg/Kg)
Dextromethorphan hydrobromide (15 mg/5 ml)	67.5 mg. (13.38 mg/Kg)
Ethanol (less than 0.6%)	

*Formulation as of January 1978.

There are numerous combination products for treatment of the symptoms associated with the common cold. The rationale for the inclusion of an antihistamine, a sympathomimetic, and an antitussive into a fixed-dosed product promoted for "cold" therapy is tenuous at best.[2] While an oral sympathomimetic agent may afford some degree of relief from the nasal "stuffiness" often seen in the cold, the antihistamine does little to resolve the symptomatology since the release of histamine is not thought to contribute or produce the typical symptoms seen in the common cold.[2] While the anticholinergic side effects of some of the antihistamines may produce a drying effect on the mucosa, it is presently felt that the presence of an antihistamine with anticholinergic side effects may not be the basis for selecting a cough or cold product.[3] Also controversial is the inclusion of an antitussive agent in the combination cold product.[3] It is recognized that all coughs are not to be suppressed since to do so would take away a primary defense mechanism of the body. While an antitussive agent may be used at times during a cold it is most often beneficial in a nonproductive, non-congestive cough that tends to be self perpetuating. When antitussive therapy is deemed advisable it would be preferable to use an appropriate dose of an agent and not be bound to a commercial product that contains a fixed amount of the ingredient.

While the value of some of the over-the-counter and prescription cold combination preparations may be questionable, it is well recognized that these products are widely used. Because of many pharmacodynamic and pharmacological differences in the child and the adult, the use of any product in the child calls for drug and dose individualization.

Toxic symptoms from an overdose with these combination cold products may be difficult to predict since symptoms of overdose may be due to one, two or three of the constituent ingredients. In addition, paradoxical or unexpected responses may be seen in children, especially with the antihistamines. If toxic symptoms of the sympathomimetic predominate, the central nervous system toxicity would be anticipated. Restlessness, dizziness, tremor, hyperactive reflexes, talkativeness, irritability and insomnia would be expected symptoms. In addition to the central effects, toxicity of sympathomimetics could also include cardiovascular or gastrointestinal symptoms. The sympathomimetic included in this commercial product is pseudoephedrine. The recommended infant dose of pseudoephedrine is 4 mg/kg/24 hrs divided into four daily doses.[4] The 1/4 teaspoonful dose prescribed in this case contains 15 mg of psudoephedrine. Normal metabolism and excretion of this agent would not normally lead to ac-

cumulation and possible toxicity. If, however, the child did not possess normal hepatic and renal function the increased serum level of pseudoephedrine could contribute to the symptoms seen in this patient.

Dextromethorphan is the antitussive included within this formulation. The oral dose for children is 1 mg/Kg/24 hrs divided into three to four daily doses. Toxic effects of this compound include gastrointestinal disturbances and slight central nervous system depression.[5] The compound's toxicity potential is regarded as low, with very high doses required to produce central nervous system depression.[6] In this case, the child was receiving 3.75 mg of dextromethorphan every four hours. It would be unlikely that this antitussive would cause the described reaction unless the child was allergic to dextromethorphan. Another potential problem with dextromethorphan use in infants and small children would be the suppression of the cough reflex, an important pulmonary defense mechanism.

Carbinoxamine is the antihistamine included in this formulation. Carbinoxamine is a member of the ethanolamine class of antihistamines. The enthanolamine class is most often associated with the highest incidence of sedative side effects. Carbinoxamine, however, is unique in that it does not demonstrate the sedative characteristics to the extent of the other ethanolamines. Toxic symptoms of antihistamine overdose may vary from central nervous system depression (drowsiness, incoordination, etc.) to stimulation (excitation, irritability, insomnia and convulsions). The stimulation symptoms are the most often observed symptoms in children.[7] Dyskinesias have also been noted in acute overdosage with the antihistamines.[8] The structural and pharmacological similarity of the antihistamines to the phenothiazines suggest that this may be a shared effect of both classes of agents.[9]

The preceding case does not unequivocally represent a drug toxicity to the combination antitussive, decongestant, and antihistamine product. The observed symptoms may represent a paradoxical reaction to one or more of the ingredients or the reaction could be due to the additive effect of normal doses in a dehydrated child. The symptoms reported parallel those reported for sympathomimetic (decongestant) and antihistamine overdose. Regardless of the cause, an examination of the case may illustrate principles of drug use in pediatrics which may prevent similar cases.

Instructions for use of the combination product were "every four hours," which the mother reported she followed faithfully for a total of six doses per day. The recommended dosage for the commercial syrup preparation for children aged 18 months to 6 years is 1/2 teaspoonful four times daily. There is no recommendation for children less than 18 months. The use of this product only as needed with a maximum limit dose may have prevented the potential toxicity.

While the dose used in this category was half the recommended amount, it was used six times daily (every four hours) rather than the recommended four times daily. This increased frequency could lead to potential toxicity. While reviewing this combination product it is interesting to note that the same combination of ingredients is available in a more concentrated dropper solution. Unlike the syrup product, this dropper solution has a dose recommendation of 1/2 ml four times daily for children 3 to 6 months of age. While the recommended dropper dose and the syrup dose provide equivalent amounts of the active ingredients, the use of a dropper might provide more convenient medication administration and increased accuracy of the measurement.

Any product used for children should be used with full parental knowledge of the intended purpose of the product and potential side effects that might occur. Had the parents been forewarned of the intent of the product and the side effects that might occur, possibly less of the product would have been used. If the product had been suspected as causing the irritability and bizarre behavior, the administration could have been stopped.

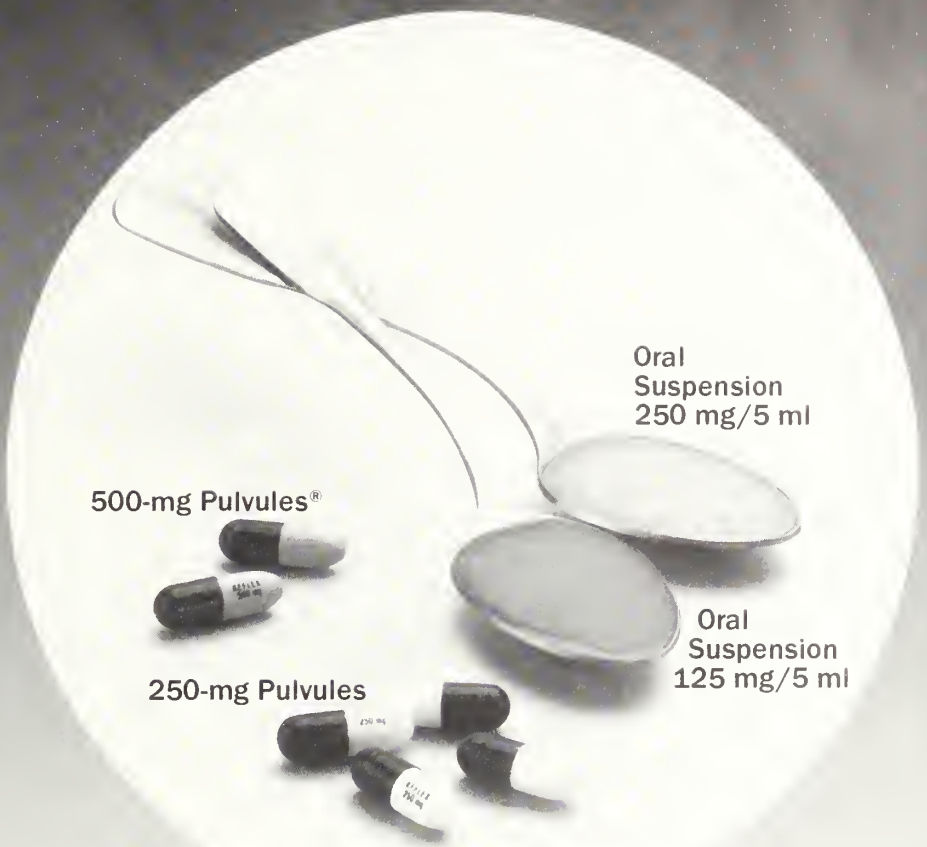
The above case well illustrates the potential toxicity that may occur with the use of drugs in the pediatric population. While we cannot prove conclusively that the child's behavior and subsequent hospitalization was an adverse reaction to the drugs in the syrup, we can presume that drug toxicity complicated initial diagnosis and care.

Another question remains regarding the use of drugs and drug products that offer little potential benefit but can cause potential problems. In such cases, consumer or parenteral pressure on the physician to offer a "drug-remedy" should be resisted to better promote child health.

REFERENCES

1. Rondex DM Product Information Sheet. Ross Laboratories, Columbus, OH, 1981.
2. Decongestant, cough, and cold preparations. In *AMA Drug Evaluations*, 5th ed., Chicago. 1983, American Medical Association, p. 549.
3. Bryant BG, Cormier JF: Cold and allergy products. In *Handbook of Nonprescription Drugs*, 7th ed., Washington, D.C., 1982, American Pharmaceutical Association, p. 123.
4. Benitz WE, Tatro DS: *The Pediatric Drug Handbook*, Chicago, 1981, Year Book Medical Publishers, p. 62.
5. Dukes MNG, editor: *Meyler's Side Effects of Drugs*, 5th ed., New York, 1981, American Elsevier Co. Inc., p. 171.
6. Jaffe JH, Martin WR: Opoid analgesic and antagonists. In Gilman A, Goodman L, Gilman A, *Goodman and Gillman's The Pharmacological Basis of Therapeutics*. 6th ed., New York, 1980. Macmillan Publishing Co., p. 494.
7. *Overdose Manual-McNeil Products*. Spring House, PA., p. 11.
8. Pearlman DS: Antihistamines: Pharmacology and clinical use. *Drugs*, 12:258, 1976.
9. Thach BT, Chase TN, Basma JF: Oral facial dyskinesia associated with prolonged use of antihistamine decongestants. *New England Journal of Medicine*, 293:486, 1975.

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Cardiac Pathology in Clostridial Septicemia

Report of a Case with Light Chain Disease

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CHIH-HUEI WU, Ph.D.[1]
Gary

Abstract

A 69-year-old man developed sudden onset of seizure and cardiac arrest following combination chemotherapy, palliative radiation therapy and decompression laminectomy of the thoracic spine for multiple myeloma of lambda light chain disease. Autopsy revealed extensive gas gangrene secondary to C. perfringens. Several intramyocardial vessels were plugged with clumps of gram-positive bacilli. The myocardial fibres were separated by irregular sizes and shapes of gas spaces. Some of the myocardial fibres were relatively well preserved, while others showed fragmentations, complete loss of cross striation and eosinophilic degeneration, especially in the SA and AV nodal areas.

THE HEART, like other organ systems of the body, may be involved by various infectious agents. Myocarditis due to bacterial, fungal or viral infection is well known. However, cardiac pathology secondary to Clostridial septicemia has not been documented in the literature.[1,2,3] The following is a study of cardiac histopathology of a previously reported case of a patient who had light chain disease and died of Clostridial septicemia.[4]

Case Report

A 69-year-old man was admitted to the hospital because of low back pain for several months.

Physical examination was essentially unremarkable. The hemoglobin level was 12.1 gm/dl, hematocrit 35%, leukocyte count 6,100/cu.mm with 57% segmented neutrophils, 3% band forms, 33% lymphocytes and 7% eosinophils. Chemistry profile revealed serum calcium of 11.1 mg/dl, BUN 38 mg/dl, creatinine 3.4 mg/dl, total protein 6.8 gm/dl, and albumin 3.4 gm/dl. Serum immunoglobulin quantitation revealed IgG of 438 mg/dl, IgA 19 mg/dl, and IgM 26 mg/dl. A 24-hour urine protein was 3.9 gm. There was a monoclonal spike and an abnormal lambda arc in the urine protein immunoelectrophoresis. A bone marrow examination revealed a hypercellular marrow of approximately 85% atypical plasma cells. A diagnosis of lambda light chain disease was made.

The patient was treated with com-

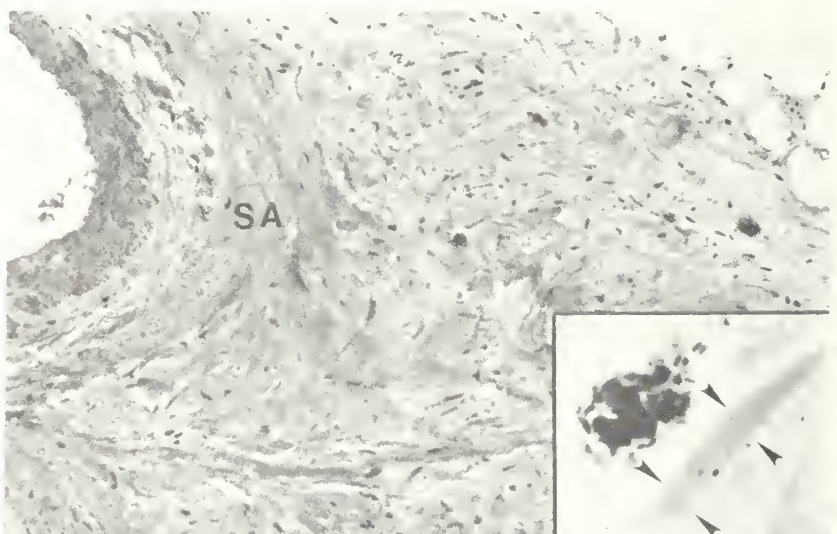


FIGURE 1: SA node (SA) shows diffuse degenerative changes (H and E stain, × 40). High power view of SA node (inset) shows presence of numerous gram-positive bacilli (C. perfringens) in a blood vessel; loss of cross striations and homogeneous, eosinophilic degeneration of the nodal tissue (arrow heads) (H and E stain, × 400).

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bination chemotherapy of Prednisone, Cytoxan, Vincristine and Melphalan. He also received radiation therapy and decompression laminectomy of the thoracic vertebrae for the low back pain. His leukocyte count dropped to 648/cu.mm. He suddenly developed seizure, cardiac arrest and expired.

At autopsy, the skin was crepitant all over the body. There were gas bubbles and honeycomb appearance in the brain, liver, spleen and kidneys. Blood cultures revealed Clostridium perfringens.

The heart weighed 350 gm. The coronary arteries showed mild to moderate atherosclerotic changes with segmental 25% to 50% occlusion of the lumina. The valvular leaflets were unremarkable. The myocardium was beefy red with multiple tiny gas bubbles.

Microscopically, there were numerous gram-positive bacilli within the intramyocardial vessels. The nodal tissues from the SA and AV nodes showed loss of cross striations and homogeneous, eosinophilic degeneration (*Figs. 1 and 2*). Sections from the right and left ventricles and interventricular septum showed focal interstitial edema and the myocardial fibres separated by irregular sized and shaped gas spaces (*Fig. 3*). Some of the myocardial fibres showed relatively well preserved cross striations, while others showed focal fragmentations, loss of cross striation and eosinophilic degeneration. (*Fig. 4*). The nuclei of the myocardial fibres were vesiculated or hyperchromatic. There was no inflammatory response.

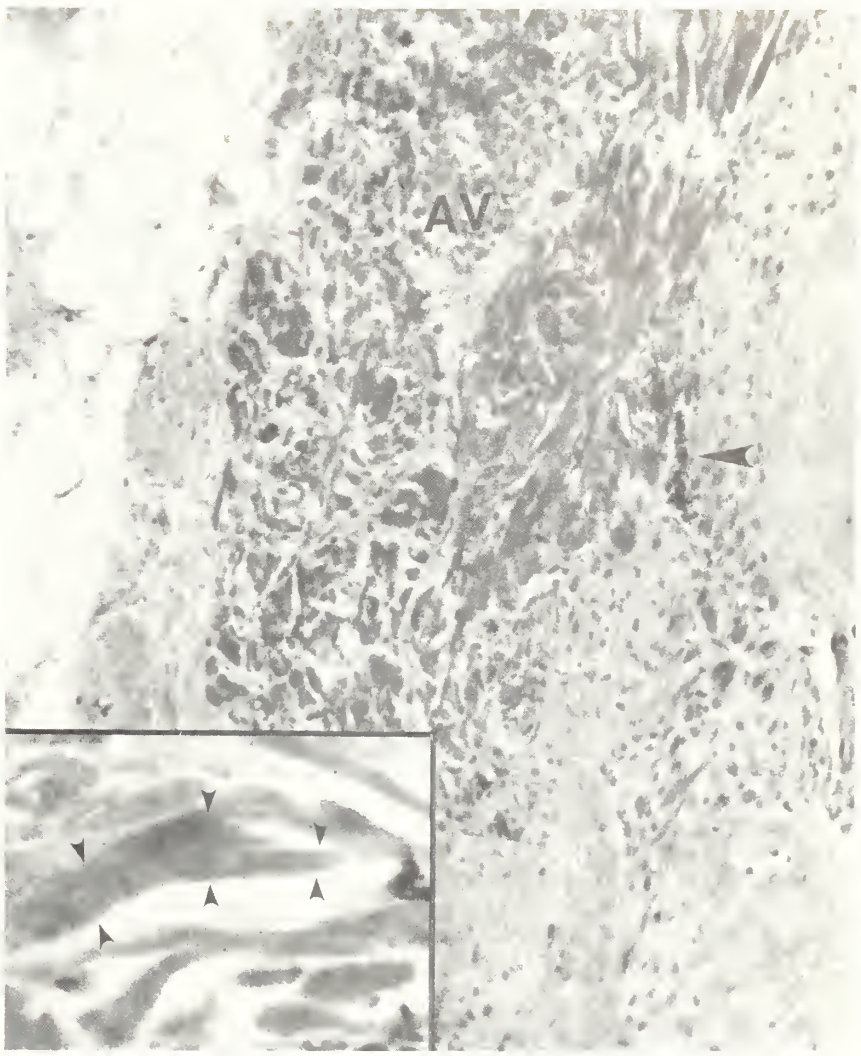


FIGURE 2: AV node (AV) shows diffuse degenerative changes and presence of numerous gram-positive bacilli (C. perfringens) in the blood vessels (arrow heads) (H and E stain, × 40). High power view of AV node (inset) shows loss of cross striations and homogeneous, eosinophilic degeneration of the nodal tissue (arrow heads) (H and E stain, × 400).

Discussion

Clostridial septicemia is a rare and highly fatal disease caused by pathogenic Clostridia originating from the uterus, colon or biliary tract. The disease has a fulminant clinical course characterized by high fever, intravascular hemolysis and shock.[5] It may develop after abdominal surgery,[6] gynecologic or obstetric manipulations,[7,8] in cancer or immune compromised patients such as the present patient who has light chain disease and marked leukopenia secondary to combination chemotherapy and radiation therapy.[9,10,11,12]

Several exotoxins are produced by Clostridium perfringens. They include proteolytic collagenase (kappa), cardiotoxic oxygen-labile hemolysin (theta), and tissue necrotizing oxygen-stable hemolysin (alpha). The alpha toxin, lecithinase C, is considered to be the causative exotoxin for the hemolysis and tissue necrosis seen in the Clostridial septicemia.[13]

The cardiac histopathologic changes in the present case include interstitial edema, gas spaces, focal fragmentations and loss of cross striations of the myocardial fibres without obvious inflammatory response. These findings are essentially identical to those of Clostridial myonecrosis.[14] Ultrastruc-

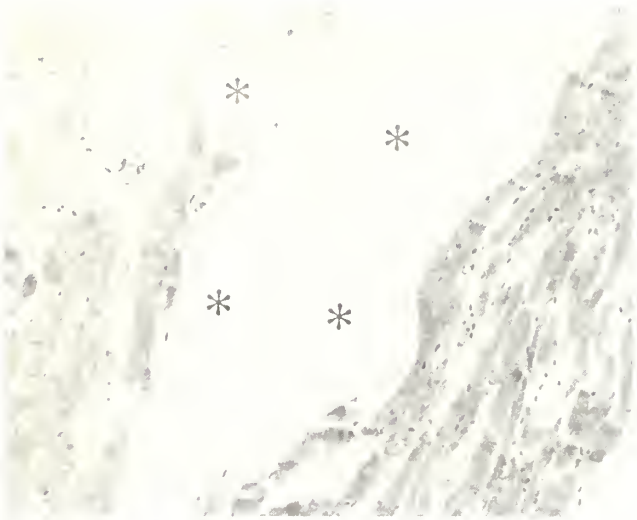


FIGURE 3: Section from the left ventricle shows the myocardial fibres separated by irregular shapes and sizes of gas spaces (asterisks) and degenerative changes of the myocardial fibres (H and E stain, × 40).

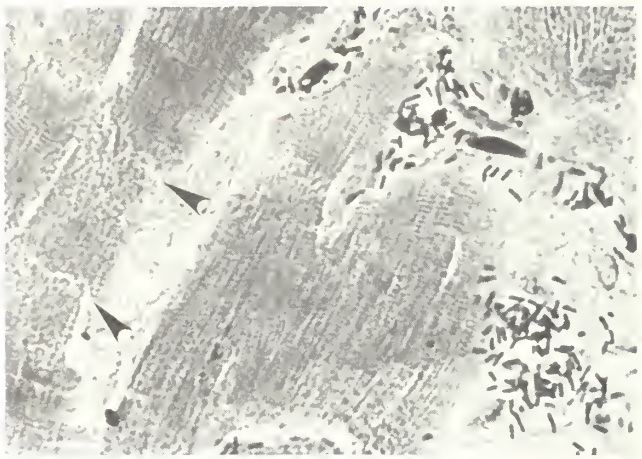


FIGURE 4: Some myocardial fibres show relatively well preserved cross striations, others show focal fragmentations, loss of cross striations and eosinophilic degeneration (arrow heads). Also presence of numerous gram-positive bacilli (C. perfringens) in the blood vessels and lack of inflammatory response (H and E stain, × 1000).

tural studies in experimental animals indicate that lecithinase C causes initial discrete disruptions of sarcolemma followed by degenerative changes of myofilaments, sarcoplasmic reticulum, mitochondria and nuclei.[15]

The degenerative changes in the SA and AV nodes appear to be more severe than those in the rest of the myocardium. The exact mechanism is not clear. However, these degenerative changes in the conduction system might have contributed to the rapid downhill course of this patient.

REFERENCES

1. Becker AE: Myocarditis. In Silver, M.D. (ed), *Cardiovascular Pathology* New York, Churchill Livingstone, Inc, pp 469-488, 1983.
2. Hudson REB: *Cardiovascular Pathology*, ed 1, London, Edward Arnold, Ltd, pp 782-854, 1965.
3. Saphir O: Myocarditis. In Gould SE (ed), *Pathology of the Heart*, ed 2, Springfiled, C Thomas, pp. 779-823, 1960.
4. Wu CH, Tsung SH: Clostridial gas gangrene and septicemia in a patient with light chain disease. *Indiana Medicine*, 77:368-369, 1984.
5. Bornstein DL: Clostridial septicemia. In Brande AI (ed), *Medical Microbiology and Infectious Diseases*, Philadelphia, W.B. Saunders Co, pp 1424-1430, 1981.
6. Parker MT: Post-operative clostridial infections in Britain. *Br Med J*, 3:671-676, 1969.
7. Mahn E, Dantuono LM: Postabortal septicotoxemia due to Clostridium welchii. *Am J Obstet Gynecol*, 70:604-610, 1955.
8. Smith LP, McLean AP, Manghan GB: Clostrium welchii septicotoxemia: A review and report of three cases. *Am J Obstet Gynecol*, 110:135-149, 1971.
9. Boggs DR. Frei E, Thomas LB: Clostridial gas gangrene and septicemia in patients with leukemia. *N Engl J Med*, 259:1255-1258, 1958.
10. Cabrera A, Tsukada Y, Pickren JW: Clostridial gas gangrene and septicemia in malignant disease. *Cancer*, 18:800-806, 1965.
11. Alpern RJ, Dowell VR, Jr: Clostridium septicum infections and malignancy. *JAMA*, 209:385-388, 1969.
12. Wynne JW, Armstrong D: Clostridial septicemia. *Cancer*, 29:215-221, 1972.
13. MacLennan JD: The histotoxic clostridial infections of man. *Bacteriol Rev*, 26:177-276, 1962.
14. Robb-Smith AHT: Tissue changes induced by Clostridium welchii type A filtrates. *Lancet*, 2:362-368, 1945.
15. Strunk SW, Smith CW, Blumberg JM: Ultrastructural studies on the lesion produced in skeletal muscle fibres by crude type A Clostridium perfringens toxin and its purified alpha fraction. *Am J Pathol*, 50:89-107, 1967.

Skin Diseases: Current Concepts, Therapy

4. FUNGUS INFECTIONS

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FUNGAL INFECTIONS constitute the second most common type of skin disease, after acne. These infections are usually superficial, comprising thrush, paronychia and pathogenic yeast infection of the skin folds, all caused by Candida albicans; and onychomycosis and ringworm of the skin and scalp, all caused by dermatophytes. The lowest incidence is in the young, the highest in inhabitants of warm, humid environments. Infection can be severe in patients with inborn errors of keratinization, and in the immunocompromised.

The pathogenic yeast Candida albicans is able to proliferate only between the keratinized cells of the surface of mucous membrane, on macerated skin and in follicular orifices. Dermatophytes, however, can actually grow within the superifical keratinized layer. The required site of action of local antimycotics is therefore the stratum corneum. In fact, the oldest treatment for scaling lesions caused by dermatophytes is the use of Whitfield's ointment to produce desquamation. The USP preparation contains salicylic and benzoic acids, in concentration of 3% and 6%, respectively. This may be rubbed in several times daily.

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Practically all antimycotic agents have a narrow spectrum of activity. Except for ciclopirox olamine and the imidazoles, they work either against dermatophytes or against yeasts, but not both. The two anticandidial antibiotics are the polyenes nystatin and amphotericin B.

Nystatin is supplied for topical application as Mycostatin. Nilstat, Candex and O-V-statin, in the form of cream, lotion, ointment, powder, oral tablets, oral suspension and vaginal tablets. The oral preparations are poorly absorbed, so they act only on yeasts in the oropharyngeal and gastrointestinal tract.

Amphotericin B (Fungizone) is available for topical application as 3% cream, lotion and ointment. The lotion resembles nail varnish and is intended for the treatment of paronychia.

Topical antifungal compounds showing some activity against dermatophytes include undecylenic acid, haloprigin and tolnaftate.[1] Undecylenic acid is supplied as Desenex or Cruex 2-10% cream, liquid, ointment, foam, shake powder, spray powder and soap. Haloprigin is available as 1% cream and solution; tolnaftate as Tinactin or Aftate cream, liquid and powder.

However, the hydroxypyridone compound ciclopirox olamine (Loprox) and the imidazoles are the newest and most effective topical antifungal compounds. These all exert broad spectrum activity against dermatophytes, yeasts and the causative organism of tinea versicolor. The topical imidazole creams comprise 1% clotrimazole (Lotrimin, Mycelex); 2% miconazole nitrate (MicaTin, Monistat-Derm); and 2% econazole nitrate (Spectazole). Some of these are also available in polyethylene glycol solution and as emulsified lotions.

Loprox is supplied as 1% topical cream only. It should be rubbed in b.i.d. or t.i.d. It is slightly more effective than an imidazole against tinea pedis, cutaneous candidiasis and tinea versicolor, both in clinical improvement and as shown by fungus cultures. In cases of tinea cruris and tinea corporis, all are equally effective, and significantly superior to the cream base alone. However, many of these conditions tend to relapse if treatment is discontinued prematurely, so therapy should be continued until the infection has been completely eradicated, otherwise some cases will recur.

Onychomycosis can be treated by repeated deep filing and the application of Loprox under occlusion. This may improve nail infection measurably after prolonged application for 18 weeks. The drug penetrates completely through the nail, and through thick plantar corneal layer, to a greater extent than the imidazoles.[2]

Topical applications of ciclopirox olamine or imidazoles are all significantly more effective than placebo in cases of dermatophytosis, candidiasis and tinea versicolor. Even after four weeks of topical treatment, however, there is a failure rate of 8-27% in tinea versicolor, 17-35% in tinea cruris and corporis, 26-40% in candidiasis and 24-49% in tinea pedis. Fungal infections of the hair and nails hardly respond at all to topical fungicides in the short term. Systemic drugs are therefore frequently employed.

The narrow-spectrum, orally administered, antifungal antibiotic griseo-

fulvin is active only against dermatophytes. It is available in micronized form as Fulvicin U/F, Grisactin, and Grifulvin V 125, 250 and 500mg tablets or capsules. There is a Grifulvin V oral suspension, 125mg/5ml. The required dose of the micronized form is 500mg for adults, or 2.5mg/lb for children, daily.

Ultramicronized formulations are approximately twice as well absorbed and are supplied as Grisactin Ultra, Gris-PEG and Fulvicin PG 125 and 250mg tablets.[3] The two last-named products are formulated with the active ingredient dissolved in polyethylene glycol and dispersed in the matrix of the tablet. Fulvicin PG also comes in 165 and 330mg tablets. The dose of the ultramicronized form is 330 mg daily for adults, except for onychomycosis in which higher doses may be required. Treatment should be continued for about four weeks for fungal infections of the skin and scalp, four to six months for infection of the nails.

Enzyme induction by griseofulvin leads to decreased activity of warfarin if the two drugs are given concurrently, and barbiturates cause decreased activity of griseofulvin. Griseofulvin is, on the whole, a fairly safe drug, although it has caused eruptions, anaphylaxis and flare of photosensitive diseases.[4] If an extensive fungal infection seems resistant to the drug, it should be taken with a fatty meal, the dose should be increased, and the course of treatment should be prolonged, before considering the other systemically administered drug active against dermatophytes, namely ketoconazole.

The imidazole synthetic compounds were derived originally from benzimidazole, and are structurally similar to adenine and guanine. Two of them are effective against helminths and cutaneous larvae, namely, mebendazole (Vermox) and thiabendazole (Mintezol).

Those with broad inhibitory spectrum against yeasts and fungi comprise clotrimazole, miconazole, econazole and ketoconazole. Ketoconazole is supplied for systemic administration as Nizoral in 200mg tablets. The usual adult dose is one to two tablets daily, although up to 1gm may be given; 5-10mg/kg/day for children. A child weighing less than 20kg might receive 50mg/day; over 40kg, 200mg.

Remission or marked improvement occurs with oral ketoconazole therapy in oral thrush, vaginal candidiasis, chronic mucocutaneous candidiasis, dermatophytosis and onychomycosis. It is slower and somewhat less effective in favus and tinea capitis caused by microsporum canis. 50% improvement is obtained by the fifth week, however, and the maximum benefit by the ninth week.[5]

Against infections caused by Trichophyton species, 200mg of ketoconazole is equally as effective as 250mg ultramicrosize griseofulvin, or more so. Some nail infections are not cured even in eight months of therapy, however, and skin lesions may relapse within five months of discontinuance. In chronic conditions, as with all antifungal treatment, therapy must be continued until all infection has been eradicated; otherwise there will be relapse.

The mild chronic infection tinea versicolor, caused by Pityrosporon orbiculare, responds to ketoconazole. Such systemic treatment is usually unnecessary, however, as this infection responds to harmless topical measures, such as shampooing with 2.5% selenium sulfide lotion. It commonly relapses after any form of treatment is discontinued. Furthermore, there is the likelihood of resistant strains of fungi developing, and danger of side effects.

The most serious side effects of oral ketoconazole are toxic hepatic dysfunction, anaphylaxis, and blockage of adrenal steroid synthesis.[6] Inhibition of testosterone synthesis has led to impotence (5% of reported reactions), gynecomastia, loss of libido and oligospermia.[7] Neutropenia and decreased hematocrit and platelet count have been reported.

For superficial fungal infections, oral ketoconazole should only be used in resistant cases unresponsive to other therapy. Ketoconazole is, however, indicated for treatment of deep mycoses. Therapy may have to be prolonged, however, two to six months for deep fungal infections. It is the drug of choice for chronic mucocutaneous candidiasis.

The deep mycotic infections sporotrichosis, chromomycosis, blastomycosis and histoplasmosis all occur in the Midwest. Yeast infections comprise candidiasis, cryptococcosis and geotrichosis; and molds, aspergillus and mucor. The imidazoles are active against nearly all superficial, subcutaneous and systemic fungal infections.

Potassium iodide has long been known for its suppressive action on infective granulomas. This is given orally in saturated aqueous solution. The initial dose is 10 drops, t.i.d., p.c., and this should be slowly increased to tolerance. The use of potassium iodide should be limited to self-healing fungus infections, specifically primary cutaneous sporotrichosis, and chromomycosis. There is some evidence that its effect is mediated through molecular iodine produced from it within the body, which is toxic to the yeast phase of Sporotrichosis.

REFERENCES

1. Coskey RJ: Dermatologic therapy. *J Am Acad Dermatol*, 3:125-148, 1980.
2. New topical antifungal drugs. *The Medical Letter*, 25:98-100, 1983.
3. Kidawa AS, German CA: A comparison of Gris-PEG and Fulvicin-U/F in the treatment of tinea pedis. *J Am Podiatry Assoc*, 71:323-327, 1981.
4. Blank H: Treatment of dermatomycoses with griseofulvin. *Arch Dermatol*, 118:835-6, 1982.
5. Levine HB: *Ketoconazole in the management of fungal disease*. Australia: ADIS Press, 1982.
6. Ketoconazole labeling revised. *FDA Drug Bulletin*, 14 #2:17-18, 1984.
7. Dermatologic Capsule & Comment: March 1983.

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Continuously Available Lidocaine Measurements

Their Impact on Coronary Care in a Community Hospital

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DAVID J. BLOMBERG, M.D.[2]
THOMAS E. ROSE, M.D.[3]
Evansville

Abstract

Over a 10-month period of study, physicians were given the option of requesting a "STAT" determination of serum lidocaine level (EMIT procedure) on a 24-hour basis. At the time of request, the attending physician was asked to prospectively predict whether the serum lidocaine level would be below the therapeutic range (<1.2 μg/ml), within range, or elevated (>5.0 μg/ml). Upon completion of the assay, the physician was notified of the results and questioned about the clinical applicability of the level. Based on the results of this study, it was shown that physicians are unable to consistently predict levels, that availability of levels influence therapeutic decisions and improve patient care, and that a community hospital laboratory can effectively offer "STAT" lidocaine levels.

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Acknowledgments: The authors wish to thank the Deaconess Hospital Foundation and the Eagles for their financial support. In addition, we thank Gail Titzer and Jane Snelling for secretarial assistance.

LIDOCAINE IS ONE of the most common anti-arrythmic agents administered to patients during the acute phase of myocardial infarction. Indeed, because of the inability to accurately predict which patients are likely to suffer from serious arrythmias, some authors[1,2,3] have advocated prophylactic administration to all patients. As with many therapeutic agents, there is marked variability in the dose-response pattern,[4] and symptoms of toxicity are often vague. Knowledge of the serum lidocaine level has clearly been useful in managing these patients,[1,5,6] and measurement of serum lidocaine levels is now within the technological capabilities of almost any hospital laboratory. We report here the results of a study evaluating the clinical utility of the "STAT" lidocaine assay in managing patients suspected of suffering an acute myocardial infarction.

Materials and Methods

Over the 10-month period of the study, the attending physician was given the option to request a "STAT" determination of the serum lidocaine level, performed by the enzyme immunoassay technique (EMIT)®, on a 24-hour basis with an expected turnaround time of less than 120 minutes.

Because of previous reports that lidocaine levels are spuriously decreased in samples collected in Vacutainer® tubes,[7] samples were collected both in Vacutainer tubes and by syringe, precluding contact with the rubber stopper. Results by each method were determined in duplicate.

At the time a lidocaine assay was requested, the attending physician was asked to prospectively predict whether the serum lidocaine level would be below the accepted therapeutic range (<1.2 μg/ml), within range, or elevated (>5.0 μg/ml). Immediately upon completion of the assay, the physician was notified of the results and was questioned about the clinical applicability of the result, in particular the speed of results reporting.

Results

Requests for a "STAT" lidocaine determination were received on 112 patients during the course of the study. Requests were received from 19 different physicians. Six different cardiologists requested 77/112 or 69% of the determinations, whereas the remainder were requested by a variety of other specialties.

In an attempt to evaluate the ability of the physicians to accurately predict the serum lidocaine concentration from the patient's clinical status, the results were arranged as shown in the *Table*. To determine whether or not the availability of a rapid measurement of serum lidocaine levels would improve the predictive ability of physicians over time, the data were arranged as shown in *Figure 1*. Figure 1 represents all physicians and *Figure 2* represents the two physicians who most frequently requested the test, both of whom were cardiologists. The comparison analysis of samples collected through the rubber stopper of the Vacutainer® tube versus those drawn by syringe is shown in *Figure 3*.

TABLE
Comparison of the Physician's Expected Serum Lidocaine Concentration Range with the Measured Range

EXPECTED SERUM LIDOCAINE CONCENTRATION RANGE	MEASURED SERUM LIDOCAINE CONCENTRATION RANGE: HIGH	THERAPEUTIC	LOW
HIGH (>5.0 μg/mL)	27	12	2
THERAPEUTIC (1.2-5.0 μg/mL)	20	38	3
LOW (<1.2 μg/mL	3	7	0

Discussion

It is not surprising that skilled clinicians are unable to reliably predict serum lidocaine levels in the seriously ill patient. Alterations of normal metabolism and excretion associated either with primary renal or hepatic disease or congestive heart failure are well documented. In addition, patients with otherwise uncomplicated acute myocardial infarction may manifest an apparent resistance to lidocaine, thought to be due to altered protein binding associated with elevated levels of α_1-acid glycoprotein, an acute phase reactant.[9] A variety of medications frequently administered to these patients either interfere directly with lidocaine metabolism or produce alterations in renal and hepatic blood flow.[10] Finally, many of the symptoms of toxicity such as rhythm disturbances, hypotension, cardiac arrest and even seizure activity can also be manifestations of the patient's primary disease process rather than due to a toxic level of lidocaine in the serum.

All physicians who participated in this study were questioned about the value of the information obtained by this assay each time they ordered it. Although not always the case, the majority of results provided them with new and relevant data that could immediately be applied to patient care. In particular, there were 13 instances in which there was concern about a possible toxic reaction where the dosage could be maintained or actually increased to suppress arrythmias. There were 18 other instances where an elevated or high therapeutic level indicated that lidocaine was not an effective drug in the particular situation and substitution of another drug was indicated.

If therapeutic drug monitoring is to meaningfully contribute to patient care, the results should ideally be available within one elimination half-life of the drug. For lidocaine, this varies considerably with the patient's overall clinical condition, but a time of 90 to 120 minutes is a reasonable approximation.[4,8] Although the original semi-automated method employed by the laboratory could theoretically be expected to achieve this goal, the concentrated operator attention required would often result in inadequate staffing of other areas of the laboratory during the evening hours, the time when the majority of these assays were requested. Implementation of newer, more highly automated methodology allowed the laboratory to provide this service.

It is becoming more important to identify those laboratory procedures that truly provide valuable information to the attending physician as opposed to those that are simply "nice to have." This is particularly true when the effort required to provide the answer is significant, as is the case with lidocaine.

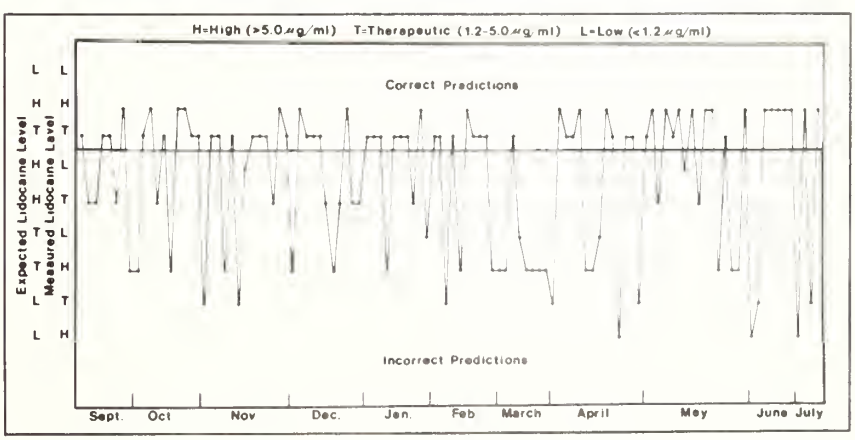


FIGURE 1: Predictive ability of all physicians in chronological order.

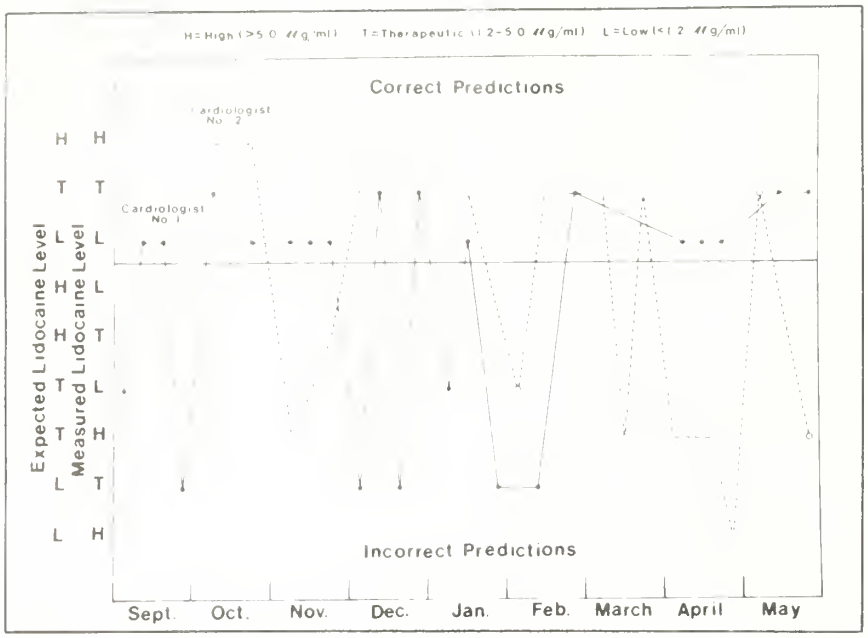


FIGURE 2: Predictive ability of two cardiologists in chronological order.

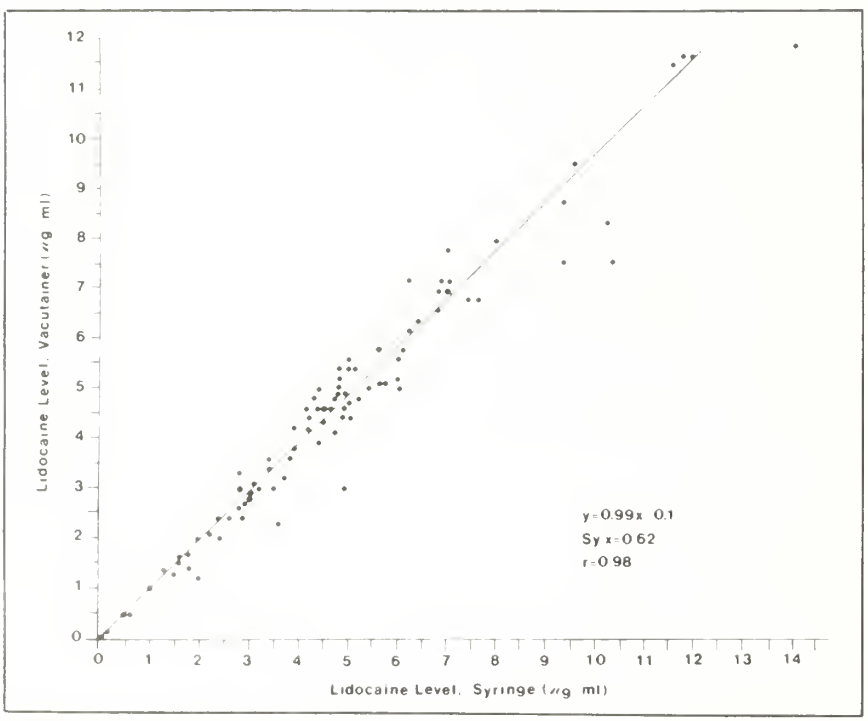


FIGURE 3: Comparison analysis of samples collected through the rubber stopper vs. those drawn by syringe.

Based on the results of this study, we believe the following conclusions are valid concerning the utility of a "STAT" lidocaine assay in a community hospital:

1. Physicians are unable to consistently predict the serum lidocaine level clinically;

2. The rapid availability of serum lidocaine levels can favorably influence therapeutic decisions regarding lidocaine administration;

3. Knowledge of lidocaine levels can improve patient care in a community hospital setting; and

4. The community hospital laboratory can effectively offer "STAT" lidocaine levels.

REFERENCES

1. Harrison DC, Berte LE: Should prophylactic antiarrhythmic drug therapy be used in acute myocardial infarction? *JAMA*, 247:2019-2021, 1982.
2. Harrison DC: Should lidocaine be administered routinely to all patients after acute myocardial infarction? *Circulation*, 58:581-584, 1978.
3. Horowitz, RI, Feinstein AR: Improved observational method for studying therapeutic efficacy: Suggestive evidence that lidocaine prophylaxis prevents death in acute myocardial infarction. *JAMA*, 246:2455-2459, 1981.
4. Sawyer DR, Ludden TM, Crawford MH: Continuous infusion of lidocaine in patients with cardiac arrhythmias: Unpredictability of plasma concentrations. *Arch Intern Med*, 141:43-45, 1981.
5. Deglin SM, Deglin JM, Wurtzlacher J, Litton M, Rolfe C, McIntire C: Rapid serum lidocaine determination in the coronary care unit. *JAMA*, 244:571-573, 1980.
6. Follath F: Serum concentration measurements for the monitoring of antiarrhythmic therapy with lidocaine. *Sweiz Med Wochensch*, 110:1007-1010, 1980.
7. Stargel WW, Roe CR, Routledge PA, Shand DG: Importance of blood collection tubes in plasma lidocaine determinations. *Clin Chem* 25:617-619, 1979.
8. Savison ER, Parker M, Atkinson AJ: Excessive serum lidocaine levels during maintenance infusions: Mechanisms and prevention. *Am Heart J*, 104:203-208, 1982.
9. Routledge PA, Stargel WW, Wagner GS, Shand DG: Increased alpha-1-acid glycoprotein and lidocaine disposition in myocardial infarction. *Ann Intern Med*, 93:701-704, 1980.
10. Syva Monitor #2, p. 6-9, November 1978.



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Purified Digoxin Specific Fab Fragments

Their Use in Preventing Serious Complications of Digoxin Toxicity

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Evansville

ALTHOUGH DIGOXIN POISONING is a relatively uncommon event in children,[1] it is potentially fatal. The mortality rates from digoxin intoxication are estimated to be up to 21%[2,3] and are mostly due to the cardiac toxicity. Purified digoxin specific Fab fragments have been recently used in children[4,5] to reverse established cardiac toxicity from digoxin overdose. We wish to report the successful use of the purified digoxin specific Fab fragments in the prevention of any serious manifestations of accidental digoxin poisoning in a 2½-year-old child.

Case Report

A 2½-year-old white male child was brought to the emergency room of St. Mary's Medical Center approximately two hours after the suspected ingestion of about 18 tablets of 0.25 mg digoxin tablets. The child was visiting an elderly couple with his parents. The empty bottle of digoxin was discovered in the childs' possession about two hours after his arrival at the friends' house.

At the time of presentation at the emergency room, the child weighed 15.1 kilograms, his blood pressure was 120/70, heart rate 104 per minute, respiration 24 per minute and he was afebrile. He was somewhat lethargic. The rest of the physical examination was within normal limits. Initial laboratory studies demonstrated Na 136 mEq/L, K 3.9 mEq/L, creatinine 0.3 mg/dl, uric acid 3.7 mg/dl and BUN 14 mg/dl. Serum digoxin level was 27.5 ng/ml. The EKG was within normal limits.

Syrup of Ipecac was administered immediately; however, no tablets were recognized in the emesis. This was followed by the administration of activated charcoal. The child was admitted to the Intensive Care Unit and was monitored closely. Within two hours after hospitalization, the child became more deeply lethargic and comatose. He remained responsive to painful stimuli. He had continuous nausea and vomited several times during the course of observation. He had frequent premature atrial beats and brief episodes of bradycardia (heart rate 60-65 per minute). Tactile stimulation generally terminated the bradycardiac episodes. The P-R interval was persistently prolonged, exceeding 0.20 seconds.

Based on the child's clinical condition, the presence of neurologic symptoms, a high serum digoxin level, the presence of minor EKG abnormalities (which are usually refractory to conventional therapy), the decision to use the purified digoxin specific Fab fragments was made. The parents' consent was obtained after the Human Investigation Committee of St. Mary's Medical Center approved the use of this antibody preparation.

Two intradermal and one intravenous test doses were given and no local or systemic untoward reactions were noticed. The child then received 325 mg of purified digoxin specific Fab fragments intravenously over 30-45 minutes. The dose was calculated to neutralize 4.5 mg of digoxin. Immediately prior to administering the antibodies, the child was deeply lethargic and nauseous, his heart rate varied between 80-90 per minute and his blood pressure was 85/60 mm. Hg. Initially, no change was noticed in the child's condition, but he was more responsive to verbal stimuli 30 minutes after completion of the treatment. His heart rate and blood pressure progressively improved and he sat up in bed in about two hours and asked for food. He was kept under observation for another 72 hours prior to his release from the hospital.

Serum digoxin level immediately after completion of the infusion of the purified digoxin specific Fab fragments was 9.5 ng/dl and it was subsequently undetectable at 30, 60 and 90 minutes. The EKG tracings were also normal.

Comments

Different manifestations of digoxin toxicity include central nervous system symptoms in 25% of patients, nausea and vomiting in 25% of cases and cardiac rhythm abnormalities in about 50% of patients. Central nervous system depression may pose a problem in a child; however, cardiac rhythm abnormalities are the most serious and

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life-threatening complications. Cardiac toxicity manifests by arrythmias and may take the form of any known rhythm disturbance.[2]

Common cardiac manifestations include atrioventricular junctional escape rhythms, ventricular bigeminy or trigeminy, atrioventricular junctional tachycardia, unifocal or multifocal ectopic ventricular beats and ventricular tachycardia.[2,6,7] There are no unequivocal electrocardiographic features that are specific for digoxin toxicity; however, sinus bradycardia is a usual sign of impending digoxin intoxication, even in the absence of first degree heart block. Our patient had both bradycardia and first degree heart block.

The mortality rate from digoxin cardiotoxicity is up to 22% and as such is a reflection of the ineffectiveness and failure of conventional anti-arrythmia therapy. Since there is no definitely known correlation between high serum digoxin levels and the clinical manifestations of cardiac toxicity, the severity or mildness of the toxic effects is largely unpredictable. Purified digoxin specific Fab fragments have been used effectively in a significant number of cases of advanced digoxin cardiac toxicity and no adverse reactions have been reported so far.[7] Two separate reports of the use of purified digoxin specific Fab fragments in children have also stressed the usefulness of this treatment in cases of established and advanced digoxin cardiotoxicity and neurotoxicity.[4,5]

We believe our case demonstrates that serious cardiac manifestations of digoxin intoxication are preventable, provided the treatment with the purified digoxin specific Fab fragments is instituted promptly. Based on current knowledge of the safety and effectiveness of purified digoxin specific Fab fragments in the treatment of advanced digoxin intoxication[4,5] and the effectiveness of this treatment in the prevention of serious and life-threatening cardiac toxicity in our case, we propose that this approach should be considered as a first line of treatment in all cases of recognized digoxin over-dose.

REFERENCES

1. Ekins BR, Watanabe AS: Acute digox in poisoning: Review of therapy. *Am J Hosp Pharm*, 35:268-277, 1978.
2. Smith TW, Haber E: Digitalis. *N Engl J Med*, 289:1125-1129, 1973.
3. Smith TW, Haber E: Digoxin intoxication: The relationship of clinical presentation to serum digoxin concentration. *J Clin Invest*, 49:2377-2386, 1970.
4. Zucker AR, Lacina SJ, *et al*: Fab fragments of digoxin specific antibodies used to reverse ventricular fibrillation induced by digoxin ingestion in a child. *Pediatrics*, 70:468-71, 1982.
5. Murphy DJ, Bremmer WF, *et al*: Massive digoxin poisoning treated with Fab fragments of digoxin specific antibodies. *Pediatrics*, 70:472-473, 1982.
6. Smith TW, Willerson JT: Suicidal and accidental digoxin ingestion: Report of five cases with serum digoxin level correlations. *Circulation*, 44:20-36, 1971.
7. Smith TW, Butler PV, *et al*: Treatment of life-threatening digitalis intoxication with digoxin specific Fab antibody fragments: Experience in 26 cases. *N Engl J Med*, 307:1357-1362, 1982.

Look-Alike and Sound-Alike Drug Names

BENJAMIN TEPLITSKY, R. PH.
Brooklyn, N.Y.

Look-alike and sound-alike drug names can be misinterpreted by a nurse reading doctors' orders or by a pharmacist compounding physicians' prescriptions. Such misunderstandings can result in the administration of a drug not intended by the prescriber. Awareness of such look alike and sound-alike drug names can reduce potential errors.

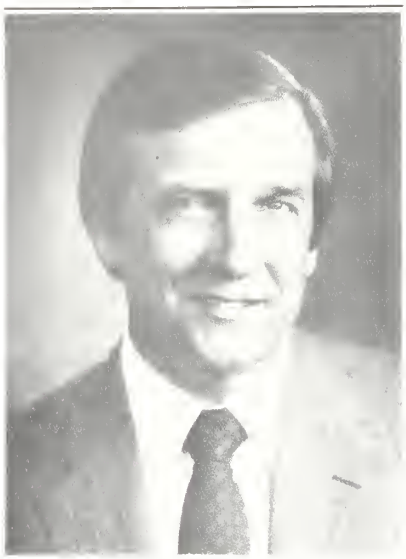
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Dosage Forms:	Tablets	Aerosol
	LIBRIUM	**LITHIUM**
Category:	Antianxiety agent	Antipsychotic
Brand Name:	Librium, Roche	Eskalith, SKF Lithane, Miles Lithobid, Ciba Lithotabs, Rowell
Generic Name:	Chlordiazepoxide	Lithium
Dosage Forms:	Capsules, Powder for Injection	Capsules, Tablets, Syrup

Physicians Against Drunk Driving

THE HOUSE OF DELEGATES of the Indiana State Medical Association, 1982, took a staunch position against drunk driving. The House not only passed a resolution to bring the full weight of ISMA policy into a crusade against the atrocity of drunk driving on our highways, but also carried the flame of determination to our General Assembly and sponsored the first real effective legislation ever to be brought to bear on this problem.

From that hour of decision came the Governor's Task Force against Drunk Driving, now recognized as Hoosiers Against Drunk Driving, or HADD. Other groups have joined this fight—most encouraging of which are the multiple chapters, some 100 in all, of SADD, or Students Against Drunk Driving, as well as the previously established and nationally known MADD, or Mothers Against Drunk Driving. This is a most appropriate action on the part of teenagers and young people because, as we face the reality of the statistics on our highways, this group of young Hoosiers between the ages of 16 and 24 represent the most important statistic in terms of highway fatalities, representing 50% of all deaths due to drunk driving on Indiana roads.

The good news in this story is that since the beginning of this crusade by physicians, students and all Hoosiers to reduce drunk driving on our highways, the number of fatalities due to drunk driving has decreased 30%. This is not a static figure, nor is it an acceptable one. The only acceptable statistic is zero deaths due to drunk driving, and without continued effort on the part of all Hoosiers to discourage drunk driving we certainly can lose the advantage we have gained. This is why the Indiana State Medical Association, through its Board of Trustees, has renewed its commitment to the worthwhile program known as Hoosiers Against Drunk Driving.



LAWRENCE E. ALLEN, M.D.
President
Indiana State Medical Assn.

This year the conference for HADD was hosted at the campus of Indiana Central University in Indianapolis. The attendance figures speak for themselves because more than 800 students from throughout the state assembled to share in the exchange of information and further their dedication to a concept that even the loss of one student due to the hazards of drunk driving is a silent reminder that Hoosiers Against Drunk Driving must continue to be an effective force in each Indiana community.

Indiana physicians sponsored more than 200 students so they could participate in this year's conference; we also have participated in the overall program of Hoosiers Against Drunk Driving as an action activity. This commitment speaks to a very basic truth for physicians—that truth which calls to each of us as physicians to be actively involved in the continued professional effort to eliminate the pain and suffering and mental anguish suffered by the young victims who survive the injuries of highway mishaps, as well as by the families who must accept the untimely death of a young man or woman.

Physicians are all too often involved in caring for the carnage after the fact. It is only just that we become more actively involved in prevention. I ask physicians in all of our communities to kindle the flame of hope and cooperation that characterizes such programs as Hoosiers Against Drunk Driving. Let us continue to be the beacon of light that brings reason to those who live with us in our cities and towns. Let the advantage we have thus far demonstrated through HADD continue.

For those physicians who are not already active in this effort, I urge you to seek out the sponsors of the local chapters of such programs as HADD, MADD, and SADD. This effort deserves the active involvement of all physicians. It is worthy of our sincere dedication for its typifies the calling of our profession—to eliminate where we may, the pain of suffering and dying for the citizens who reside in our care.

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medicine at the crossroads

The Theory of Bureaucratic Incentives

The Voice of Business

A GOOD DEAL OF what happens in government is the result of the Theory of Bureaucratic Incentives (TBI).

TBI is an illustration of the common sense idea that most people most of the time do what they perceive will bring them pleasure rather than pain. Employees, for example, want to do what merits praise and advancement from their superiors.

In business, the identifiable incentives generally relate to bottom line profits. In government, the basis for success—at all levels—relates to other factors. Generally, a successful bureaucrat is one who does the job by the book and at minimum risk, whether or not it makes economic or any other kind of sense.

An employee of the federal Food and Drug Administration risks an unbelievable amount of grief up and through the Oval Office by recommending approval of a new drug. The TBI principle cautions against approval because the painful consequences of failure (drug-induced death or serious side effects) outweigh the pleasureable rewards of success (efficacy and safety).

All things considered, the FDA person is much safer and more appreciated by taking as few risks as possible, even for good cause.

On the other hand, a state-level grant administrator whose duties include approving subsidies for business expansion has (per TBI) incentive to wield the ladle generously. It pleases superiors, the benefitted businesses, local communities and—if the bureaucrat is recognized at groundbreaking ceremonies—spouse, parents and children.



JOHN W. WALLS
President
Indiana State
Chamber of Commerce

Other Side of the Coin

What if the administrator, instead of saying "yes," says "no," even with good reason? Bad things happen. Unspent funds; lack of recognition for the bureaucrat or superiors; criticism by the disappointed mayor; no approving editorials.

Indiana is fortunate in being served by a grant administrator, Kenneth Kobe, who frequently didn't act according to the TBI principle but employed prudence instead. As a key official in the Department of Commerce, he managed tax money with care by disapproving the proposals that didn't compute.

This sterling quality commended him to Governor Robert Orr, who recently name Kobe to be the next budget director.

The governor must have figured that a responsible steward of public funds, who acted in opposition to the TBI principle when it was justified, would do an outstanding job in a position where protection of the public's money is the standard for excellence.

Frankly, that office is the lousiest job in state government. It is inhabited by the Resident Bad Guy; the Wet Blanket; the person whose constant refrain is: "That's a lovely idea, but we can't afford it," or, "Your prayers have been answered—the answer is no!"

Kobe is succeeding Judy Palmer as budger director. Careful students of state government realize what a superb job she has done.

Succeeding the Hard Way

Events (the economy) dealt her a pair of deuces. Anyone can look good in boom times, but she did it the hard way and in so doing epitomized Napoleon's definition of a great general—one who after a major defeat can restore his (her) position in the face of great pressure by the enemy.

Ms. Palmer presided during the worst downturn since the Great Depression, but leaves Mr. Kobe with a balanced budget and a fully financed Rainy Day Fund. Napoleon would have decorated her.

Thanks, Judy Palmer, and good luck, Ken Kobe. We'll try to be there when you need us.



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Low incidence of side effects
CARDIZEM® (diltiazem HCl) produces an incidence of adverse reactions not greater than that reported with placebo therapy, thus contributing to the patient's sense of well-being.

*Cardizem is indicated in the treatment of angina pectoris due to coronary artery spasm and in the management of chronic stable angina (classic effort-associated angina) in patients who cannot tolerate therapy with beta-blockers and/or nitrates or who remain symptomatic despite adequate doses of these agents.

References:
1. Strauss WE, McIntyre KM, Parisi AF, et al: Safety and efficacy of diltiazem hydrochloride for the treatment of stable angina pectoris: Report of a cooperative clinical trial. Am J Cardiol 49:560-566, 1982.
2. Pool PE, Seagren SC, Bonanno JA, et al: The treatment of exercise-inducible chronic stable angina with diltiazem: Effect on treadmill exercise. Chest 78 (July suppl):234-238, 1980.

Reduces angina attack frequency*
42% to 46% decrease reported in multicenter study.[1]

Increases exercise tolerance*
In Bruce exercise test,[2] control patients averaged 8.0 minutes to onset of pain; Cardizem patients averaged 9.8 minutes ($P<.005$).

CARDIZEM®
(diltiazem HCl)

THE BALANCED CALCIUM CHANNEL BLOCKER

Please see full prescribing information on following page.

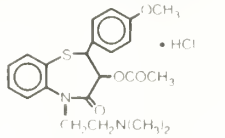
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PROFESSIONAL USE INFORMATION

cardizem®
(diltiazem HCl)
30 mg and 60 mg tablets

DESCRIPTION

CARDIZEM® (diltiazem hydrochloride) is a calcium ion influx inhibitor (slow channel blocker or calcium antagonist). Chemically, diltiazem hydrochloride is 1,5-Benzothiazepin-4(5H)one,3-(acetyloxy) -5-[2-(dimethylamino)ethyl]-2,3-dihydro-2-(4-methoxyphenyl)-, monohydrochloride,(+)-cis- The chemical structure is



Diltiazem hydrochloride is a white to off-white crystalline powder with a bitter taste. It is soluble in water, methanol, and chloroform. It has a molecular weight of 450.98. Each tablet of CARDIZEM contains either 30 mg or 60 mg diltiazem hydrochloride for oral administration.

CLINICAL PHARMACOLOGY

The therapeutic benefits achieved with CARDIZEM are believed to be related to its ability to inhibit the influx of calcium ions during membrane depolarization of cardiac and vascular smooth muscle.

Mechanisms of Action. Although precise mechanisms of its antianginal actions are still being delineated, CARDIZEM is believed to act in the following ways:

1. Angina Due to Coronary Artery Spasm. CARDIZEM has been shown to be a potent dilator of coronary arteries both epicardial and subendocardial. Spontaneous and ergonovine-induced coronary artery spasm are inhibited by CARDIZEM.
2. Exertional Angina. CARDIZEM has been shown to produce increases in exercise tolerance, probably due to its ability to reduce myocardial oxygen demand. This is accomplished via reductions in heart rate and systemic blood pressure at submaximal and maximal exercise work loads.

In animal models, diltiazem interferes with the slow inward (depolarizing) current in excitable tissue. It causes excitation-contraction uncoupling in various myocardial tissues without changes in the configuration of the action potential. Diltiazem produces relaxation of coronary vascular smooth muscle and dilation of both large and small coronary arteries at drug levels which cause little or no negative inotropic effect. The resultant increases in coronary blood flow (epicardial and subendocardial) occur in ischemic and nonischemic models and are accompanied by dose-dependent decreases in systemic blood pressure and decreases in peripheral resistance.

Hemodynamic and Electrophysiologic Effects. Like other calcium antagonists, diltiazem decreases sinoatrial and atrioventricular conduction in isolated tissues and has a negative inotropic effect in isolated preparations. In the intact animal, prolongation of the AH interval can be seen at higher doses.

In man, diltiazem prevents spontaneous and ergonovine-provoked coronary artery spasm. It causes a decrease in peripheral vascular resistance and a modest fall in blood pressure and, in exercise tolerance studies in patients with ischemic heart disease, reduces the heart rate-blood pressure product for any given work load. Studies to date, primarily in patients with good ventricular function, have not revealed evidence of a negative inotropic effect, cardiac output, ejection fraction, and left ventricular end diastolic pressure have not been affected. There are as yet few data on the interaction of diltiazem and beta-blockers. Resting heart rate is usually unchanged or slightly reduced by diltiazem.

Intravenous diltiazem in doses of 20 mg prolongs AH conduction time and AV node functional and effective refractory periods approximately 20%. In a study involving single oral doses of 300 mg of CARDIZEM in six normal volunteers, the average maximum PR prolongation was 14% with no instances of greater than first-degree AV block. Diltiazem-associated prolongation of the AH interval is not more pronounced in patients with first-degree heart block. In patients with sick sinus syndrome, diltiazem significantly prolongs sinus cycle length (up to 50% in some cases).

Chronic oral administration of CARDIZEM in doses of up to 240 mg/day has resulted in small increases in PR interval, but has not usually produced abnormal prolongation. There were, however, three instances of second-degree AV block and one instance of third-degree AV block in a group of 959 chronically treated patients.

Pharmacokinetics and Metabolism. Diltiazem is absorbed from the tablet formulation to about 80% of a reference capsule and is subject to an extensive first-pass effect, giving an absolute bioavailability (compared to intravenous dosing) of about 40%. CARDIZEM undergoes extensive hepatic metabolism in which 2% to 4% of the unchanged drug appears in the urine. In vitro binding studies show CARDIZEM is 70% to 80% bound to plasma proteins. Competitive ligand binding studies have also shown CARDIZEM binding is not altered by therapeutic concentrations of digoxin, hydrochlorothiazide, phenylbutazone, propranolol, salicylic acid, or warfarin. Single oral doses of 30 to 120 mg of CARDIZEM result in detectable plasma levels within 30 to 60 minutes and peak plasma levels two to three hours after drug administration. The plasma elimination half-life following single or multiple drug administration is approximately 3.5 hours. Desacetyl diltiazem is also present in the plasma at levels of 10% to 20% of the parent drug and is 25% to 50% as potent a coronary vasodilator as diltiazem. Therapeutic blood levels of CARDIZEM appear to be in the range of 50 to 200 ng/ml. There is a departure from dose-linearity when single doses above 60 mg are given; a 120-mg dose gave blood levels three times that of the 60-mg dose. There is no information about the effect of renal or hepatic impairment on excretion or metabolism of diltiazem.

INDICATIONS AND USAGE

1. **Angina Pectoris Due to Coronary Artery Spasm.** CARDIZEM is indicated in the treatment of angina pectoris due to coronary artery spasm. CARDIZEM has been shown effective in the treatment of spontaneous coronary artery spasm presenting as Prinzmetal's variant angina (resting angina with ST-segment elevation occurring during attacks).
2. **Chronic Stable Angina (Classic Effort-Associated Angina).** CARDIZEM is indicated in the management of chronic stable angina. CARDIZEM has been effective in controlled trials in reducing angina frequency and increasing exercise tolerance.

There are no controlled studies of the effectiveness of the concomitant use of diltiazem and beta-blockers or of the safety of this combination in patients with impaired ventricular function or conduction abnormalities.

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. **Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
2. **Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt). Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. **Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
4. **Acute Hepatic Injury.** In rare instances, patients receiving CARDIZEM have exhibited reversible acute hepatic injury as evidenced by moderate to extreme elevations of liver enzymes. (See PRECAUTIONS and ADVERSE REACTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.

Drug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women, therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, exercise caution when CARDIZEM is administered to a nursing woman if the drug's benefits are thought to outweigh its potential risks in this situation.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences, as well as their frequency of presentation, are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%), AV block (1.1%). In addition, the following events were reported infrequently (less than 1%) with the order of presentation corresponding to the relative frequency of occurrence:

Cardiovascular	Flushing, arrhythmia, hypotension, bradycardia, palpitations, congestive heart failure, syncope
Nervous System	Paresthesia, nervousness, somnolence, tremor, insomnia, hallucinations, and amnesia
Gastrointestinal:	Constipation, dyspepsia, diarrhea, vomiting, mild elevations of alkaline phosphatase, SGDT, SGPT, and LDH
Dermatologic	Pruritus, petechiae, urticaria, photosensitivity.
Other	Polyuria, nocturia.

The following additional experiences have been noted:

A patient with Prinzmetal's angina experiencing episodes of vasospastic angina developed periods of transient asymptomatic asystole approximately five hours after receiving a single 60-mg dose of CARDIZEM.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: erythema multiforme, leukopenia, and extreme elevations of alkaline phosphatase, SGDT, SGPT, LDH, and CPK. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

OVERDOSAGE OR EXAGGERATED RESPONSE

Overdosage experience with oral diltiazem has been limited. Single oral doses of 300 mg of CARDIZEM have been well tolerated by healthy volunteers. In the event of overdosage or exaggerated response, appropriate supportive measures should be employed in addition to gastric lavage. The following measures may be considered:

Bradycardia	Administer atropine (0.60 to 1.0 mg). If there is no response to vagal blockade, administer isoproterenol cautiously.
High-Degree AV Block	Treat as for bradycardia above. Fixed high-degree AV block should be treated with cardiac pacing.
Cardiac Failure	Administer inotropic agents (isoproterenol, dopamine, or dobutamine) and diuretics.
Hypotension	Vasopressors (eg, dopamine or levarterenol bitartrate).

Actual treatment and dosage should depend on the severity of the clinical situation and the judgment and experience of the treating physician.

The oral LD_{50}'s in mice and rats range from 415 to 740 mg/kg and from 560 to 810 mg/kg, respectively. The intravenous LD_{50}'s in these species were 60 and 38 mg/kg, respectively. The oral LD_{50} in dogs is considered to be in excess of 50 mg/kg, while lethality was seen in monkeys at 360 mg/kg. The toxic dose in man is not known, but blood levels in excess of 800 ng/ml have not been associated with toxicity.

DOSAGE AND ADMINISTRATION

Exertional Angina Pectoris Due to Atherosclerotic Coronary Artery Disease or Angina Pectoris at Rest Due to Coronary Artery Spasm. Dosage must be adjusted to each patient's needs. Starting with 30 mg four times daily, before meals and at bedtime, dosage should be increased gradually (given in divided doses three or four times daily) at one- to two-day intervals until optimum response is obtained. Although individual patients may respond to any dosage level, the average optimum dosage range appears to be 180 to 240 mg/day. There are no available data concerning dosage requirements in patients with impaired renal or hepatic function. If the drug must be used in such patients, titration should be carried out with particular caution.

Concomitant Use With Other Antianginal Agents:

1. **Sublingual NTG** may be taken as required to abort acute anginal attacks during CARDIZEM therapy.
2. **Prophylactic Nitrate Therapy**—CARDIZEM may be safely coadministered with short- and long-acting nitrates, but there have been no controlled studies to evaluate the antianginal effectiveness of this combination.
3. **Beta-blockers.** (See WARNINGS and PRECAUTIONS.)

HOW SUPPLIED

Cardizem 30-mg tablets are supplied in bottles of 100 (NDC 00088-1771-47) and in Unit Dose Identification Paks of 100 (NDC 00088-1771-49). Each green tablet is engraved with MARION on one side and 1771 engraved on the other. CARDIZEM 60-mg scored tablets are supplied in bottles of 100 (NDC 00088-1772-47) and in Unit Dose Identification Paks of 100 (NDC 00088-1772-49). Each yellow tablet is engraved with MARION on one side and 1772 on the other.

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CME QUIZ

TO OBTAIN ONE HOUR OF CATEGORY 1 AMA CME CREDIT, answer the following questions by circling the correct answer on the answer sheet below. Complete and clip the application form and mail it to: Indiana University School of Medicine, CME Division, Fesler Hall 224, 1120 South Dr., Indianapolis 16223.

The Chest Radiograph

CONTINUED FROM PAGES 753-756

1. The *prevalence* of a disease or condition refers to:
   a. the number of cases existing in a population sample at any one time.
   b. the number of persons who survive after contracting the disease.
   c. the number of cases that occur in a population sample over a period of time.
   d. the proportion of persons with the disease among those with a positive diagnostic test.
2. When we refer to a test as a screening examination, we mean:
   a. the test is done to evaluate causes of specific symptoms.
   b. the test is ordered by a nurse practitioner or physican's assistant.
   c. the test is performed as part of a battery of tests.
   d. the test is performed without regard to symptoms or abnormalities on history or physical examination.
3. The percentage of all chest radiographs performed at the time of hospital admission that are done for "routine" or screening purposes is:
   a. 10%.
   b. 30%.
   c. 60%.
   d. 75%.
4. In patients without evidence of cardiopulmonary disease, what percent of patients can be expected to have significant abnormalities on chest radiographs obtained at the time of hospital admission:
   a. less than 10%
   b. 10 to 20%.
   c. 20 to 30%.
   d. 30 to 40%.
5. The most common finding on screening chest radiographs has been:
   a. infiltrates.
   b. cardiomegaly.
   c. chronic obstructive pulmonary disease.
   d. evidence of old tuberculosis.
6. Which one of the following statements concerning chest radiographs obtained to screen for lung cancer is true:
   a. If found, cancers are no more likely to be operable than if chest radiographs are only done to evaluate symptoms.
   b. Screening chest radiography can be expected to lower mortality.
   c. Studies of this subject have contained too few subjects to be conclusive.
   d. None of the above.
7. Concerning tuberculosis, screening chest radiography is justified:
   a. yearly on all patients with positive PPD skin tests.
   b. yearly on all patients who have completed a course of chemotherapy for active tuberculosis.
   c. on all patients with positive PPD skin tests with no prior chest radiograph on record.
   d. yearly on all hospital employees.
8. The yield of all active tuberculosis cases in persons participating in massive screening programs was:
   a. 1%
   b. 0.1%
   c. 0.01%
   d. None of the above.
9. The carcinogenic risk to humans of low dose ionizing radiation such as that incurred with diagnostic radiography is:
   a. known to be low.
   b. known to be high.
   c. estimated by the effects of irradiation of animals.
   d. estimated by epidemiologic studies of humans.
10. Screening chest radiography can be justified on which of the following:
    a. persons being hired to work in uranium mines.
    b. spouses of persons with lung cancer.
    c. hospital employees.
    d. none of the above.

AUGUST CME QUIZ Answers

Following are the answers to the CME quiz that appeared in the August 1985 issue: "Alcoholism Research: Recent Developments," by Ross McHenry, M.D. and David W. Crabb, M.D.

1. c	6. d
2. d	7. b
3. d	8. a
4. c	9. c
5. d	10. a

Answer sheet for Quiz: (Chest Radiograph . . .)

1. a b c d	6. a b c d
2. a b c d	7. a b c d
3. a b c d	8. a b c d
4. a b c d	9. a b c d
5. a b c d	10. a b c d

I wish to apply for one hour of category 1 AMA Continuing Medical Education credit through the I.U. School of Medicine. I have read the article and answered the quiz on the answer sheet above. I understand that my answer sheet will be graded confidentially, at no cost to me, and that notification of my successful completion of the quiz (80% of the questions answered correctly) will be directed to me for my application for the Physician's Recognition Award of the American Medical Association. I also understand that if I do not answer 80% of the questions correctly, I will not be advised of my score but the answers will be published in the next issue of INDIANA MEDICINE.

Name (please print or type)

Address

Identification number (found above your name on mailing label)

Signature

To be eligible for this month's quiz, send your completed, signed application before Oct. 10, 1985 to the address appearing at the top of this page.



AUXILIARY REPORT

Muriel Osborne (Mrs. John)
ISMA Auxiliary President 1985-86

"Good Morning, boys and girls. My name is Mrs. Allen and I am so glad that your teacher invited me to come visit you today. I brought a friend with me. Her name is Henrietta and she wants to tell you about her wonderful body machine and how it works to keep her healthy if she takes good care of it."

This is a sample of what I say to the children in a kindergarten class when I visit to share the message of good health habits through "An Early Start To Good Health." Allen County auxilians have been sharing this excellent material with the school children of our county for the past two years.



Two years ago our Health Education chairman first saw the "An Early Start To Good Health" materials, developed and distributed by the American Cancer Society. She was so impressed with the quality of the material and the excellent teaching guide that accompanies each kit that she set about recruiting a few auxilians to work in the project. We started small; nine women met at the American Cancer Society office on a Saturday morning for a training session. We each then approached teachers in schools we were familiar with, or worked through the principal.

We were not sure that our offer to present this material in the classrooms would be well received. Most of the teachers were very receptive and, on the strength of the success the nine auxilians experienced, the Health Education chairman proceeded with plans to expand the project. She made arrangements to make a presentation to the teachers during their annual convention in late October. She hoped that some of the teachers would be interested. Much to her surprise she ended up doing a presentation to standing room only. Many of the teachers signed up for a program.

One of our auxilians made "Henrietta" dolls, which look just like the little girl in the kindergarten film strip. They are about 15 inches high and have a cavity in the upper body which houses little organs (lungs, heart and stomach) all held in place with Velcro. The children love to see where the parts of the wonderful body machine are in relation to the whole body.

We are now at the most important point in this project. The initial interest has waned. We must develop an ongoing method of contacting the teachers to make appointments to visit their classrooms. We must recruit auxilians to replace those who drop out of the project.

We are most fortunate in that Allen County has one of the few American Cancer Society offices in the state with a full-time program director available to work with us. The ACS is ready and willing to help us develop a method of contacting teachers every year so new teachers will know we are available.

We must continue to attract auxilians to the project. One way to do this is by expanding the program to include materials for older children since some auxilians are not comfortable working with the very young children. The American Cancer Society has materials equally as good as "An Early Start To Good Health" and equally as easy to work with for grades K through 12. We want to offer these fine materials to the children in grades 4 through 6, junior high and senior high school. At the senior high school level most of the material is in the form of films, but the teachers need to be made aware that these films are available and at no charge to the school system.

Allen County got off to a running start, but we have slowed down. This year we must implement procedures that will carry over from one year to the next. We have learned that while projects require careful attention when they are new, we also must develop well organized ongoing plans if it is to continue to grow and develop.—**Sylvia Scheeringa (Mrs. Ronald), ISMA-A Health Projects chairman.**



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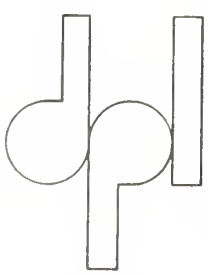
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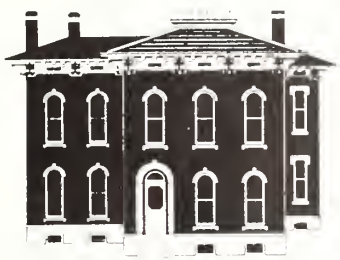
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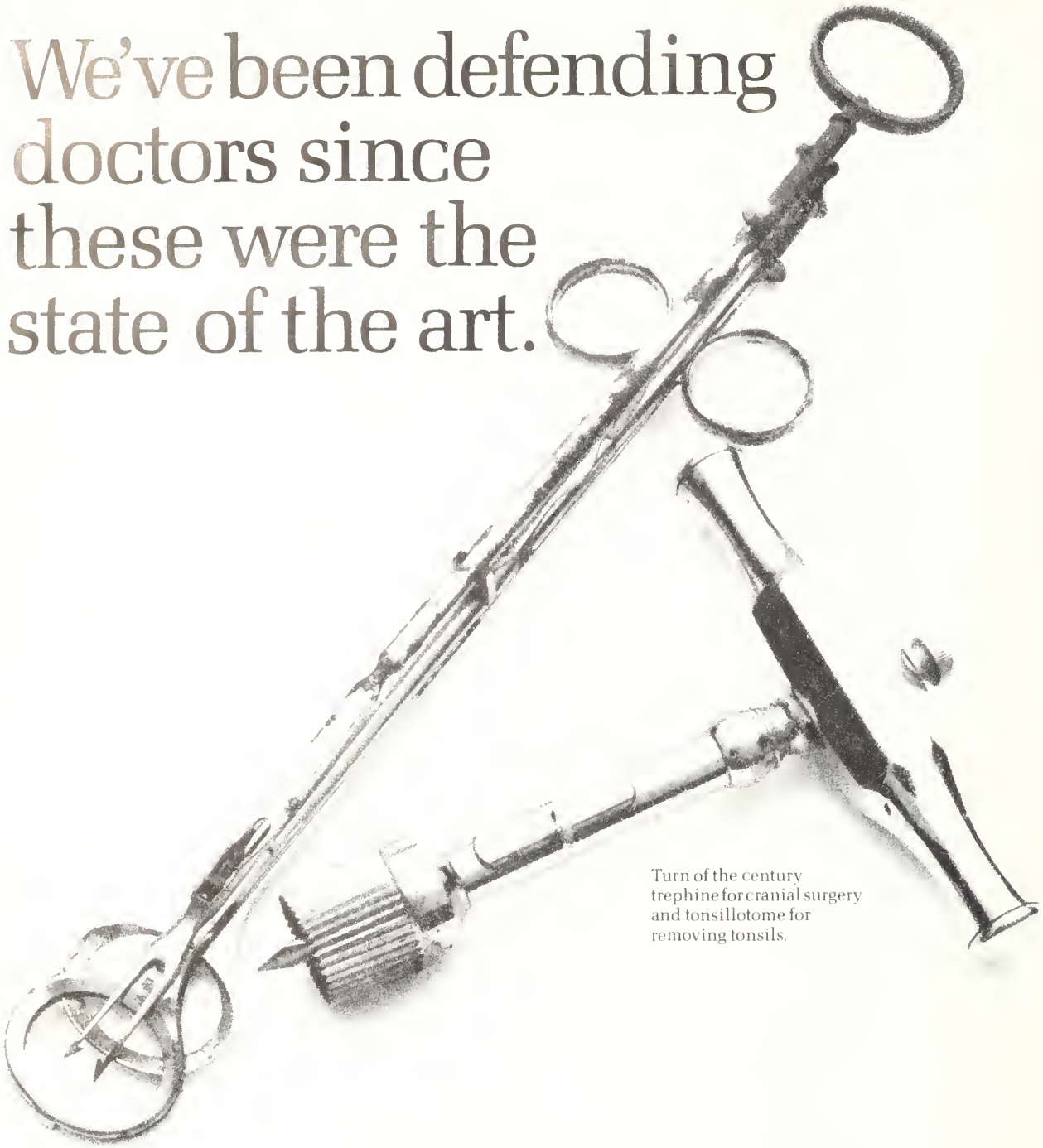
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NEWS NOTES

Syntex Program Aimed at Cardiovascular Research

Syntex is helping to cushion the impact of government cutbacks in R&D funding by providing private support to university scientists who are conducting important cardiovascular research.

Dr. Albert Bowers, Syntex chairman, says: "We believe it is incumbent upon us to help. We have established the Syntex Scholars Program which provides direct financial support so that valuable research concerning new treatments and possible cures for cardiovascular diseases can continue."

Yale Researchers Honored

Allen Steere, M.D., and Stephen E. Malawista, M.D., of Yale University School of Medicine were recently awarded the CIBA-GEIGY-ILAR Rheumatology Prize at the International Congress of Rheumatology in Sydney, Australia, for unraveling the mystery of Lyme disease.

The disease acquired its name because the human cases in whom the ailment was first studied were residents of Lyme, Connecticut.

It has been discovered that the illness is caused by a bacterial organism commonly carried by a deer tick. The infection causes skin lesions, headaches, neurologic and cardiac abnormalities and frequently arthritis. It is a complex disease and presents different symptoms at different stages.

The Amy Sloan Fund

Eight health care associations including the ISMA have established a privately funded trust fund for Lafayette AIDS victim Mrs. Amelia (Amy) Sloan.

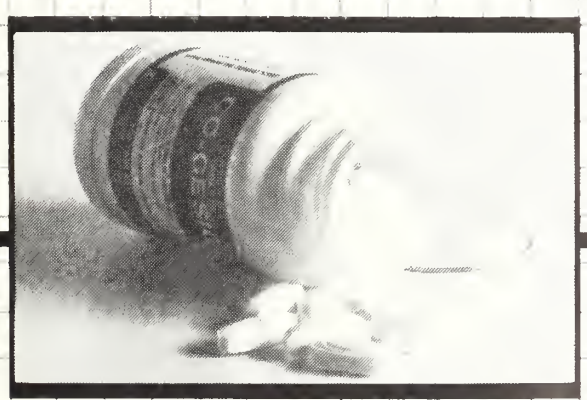
Mrs. Sloan is alleged to have contracted AIDS through a blood transfusion at an Indiana hospital. It was during the recent legislative session that the plight of Mrs. Sloan was brought to the attention of the ISMA and the Indiana General Assembly. As an alternative to the intent of the legislation, which would have compensated Mrs. Sloan through the Patient's Compensation Fund without proving negligence, the ISMA and other health care groups established this trust fund.

A part of the monies collected in this fund is to be used to help defray some of Mrs. Sloan's medically related expenses. Another portion of the funds will be sent to the National Institutes of Health to assist in research of the AIDS disease.

Anyone wishing to contribute to the Amy Sloan Assistance Project may send donations to: Amy Sloan Assistance Project, Lafayette National Bank, P.O. Box 780/Trust, Lafayette, Ind. 47902.

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NEWS NOTES

Here and There . . .

Dr. William F. Nowlin of Merrillville, chief of surgery for St. Mary Medical Center, has won the *Gary Post-Tribune's* Edgar L. Mills Community Service Award for "significant contributions to the quality of life in northwest Indiana."

Dr. Donald E. Clayton of Lafayette is the new president of the American Lung Assn., West Central Region.

Dr. Eric S Williams of Indianapolis is the new president of the Marion County Chapter, American Heart Assn.; Dr. Ray L. Henderson of Indianapolis is vice-president.

Dr. Jack T. Collins, a Bluffton cardiologist, has been presented the Gold Heart Award for meritorious service by the Northeast Chapter, American Heart Assn.

Dr. Donald Grillo, a retired South Bend physician, was recently recognized at a United Health Services awards banquet for 20 years of service to the Ostomy Chapter of St. Joseph County, which he founded in 1964.

Dr. Elsworth K. Stucky, an Indianapolis family physician, has retired from private practice.

Dr. L. Michael Silvers of North Manchester is the new president of the Indiana Academy of Family Physicians.

Dr. Alfred T. Chappel of Franklin, chief of staff at Johnson County Memorial Hospital, has retired after practicing in Johnson County more than 30 years.

Dr. Warren L. Bergwall of Muncie has been presented the Lester D. Bibler Award by the Indiana Academy of Family Physicians; it is the IAFP's highest award, presented for "effective leadership toward the development of family medicine." Dr. Bergwall spearheaded a rubella vaccine program in the Muncie school system and has staffed the Family Practice Residency Program at Ball Memorial Hospital for several years.



Dr. Egger

Dr. Ross L. Egger of Daleville has become a consultant with Blue Cross-Blue Shield of Indiana.

Dr. Donald Chamberlain of Mishawaka is the new president of the Indiana Roentgen Society; Dr. Donald R. Sugarman of Fort Wayne is president-elect.

Dr. Randolph W. Lievertz of Indianapolis has been re-elected to the board of directors of the Greater Indianapolis Council on Alcoholism; his new term runs until August 1988.

Dr. Clarence E. Ehrlich of Indianapolis was recently visiting professor at Walter Reed Army Hospital. He gave two presentations, "Predicting Gynecologic Cancer—Responsiveness to Chemotherapy," and "The Changing Role of Surgery and Chemotherapy in the Management of Epithelial Ovarian Tumors."

Dr. Robert E. Rogers of Indianapolis traveled to Munich, Germany and Graz, Austria to attend the Felix Rutledge Society meeting; he lectured on "Ectopic Pregnancy Following Tubal Litigation."

H. William Gilmore, D.D.S., became the new dean of Indiana University School of Dentistry July 1, succeeding Dr. Ralph E. McDonald, who retired after serving 16 years as dean. Dr. Gilmore, a 1958 graduate of the I.U. School of Dentistry, served as editor of the *Journal of the Indiana Dental Association* from 1974 to 1984.

Dr. William W. Drummy of Terre Haute was guest speaker at a meeting of the Alzheimer's Disease Support Group, held in June at the Vigo County Library.

Dr. Calvin J. Maestro Jr. of Munster presented an address entitled "Can You Prevent Illness?" during a June program at the Lake County Public Library.

Physician Recognition Awards

The following ISMA physicians are recent recipients of the AMA's Physician Recognition Award. This award is official documentation of Continuing Medical Education hours earned, and is acceptable proof in most states requiring CME in re-registration that the mandatory hours of CME have been accomplished.

Bainbridge, Ruth S., Bicknell
Bastnagel, James P., Shelbyville
Beck, Gary L., Evansville
Bowman, John A., Kokomo
Chandler, Jeffery R., Evansville
Conway, Louis W., Lafayette
Del Giudice, Joseph, Jasper
Dian, Donald A., Bluffton
Gruszynski, Thomas R., Granger
Kim, Charles Y., Terre Haute
Meier, Donald W., Bluffton
Pletzer, David P., Noblesville
Ragsdale, Rex H., Evansville
Scherschel, Kim P., Bedford
Somes, Claudia J., Indianapolis
Tanselle, Timothy R., Crawfordsville
Umphrey, James E., Bluffton
Walker, Grace L., Indianapolis

For the Asking . . . .

•A new safety film shows workers how to protect their health and safety around hazardous chemicals. BNA Communciations is now selling or renting "Right to Know: Working Around Hazardous Substances" in 16mm film, VHS or ¾-inch videocassette. Contact Customer Service, BNA Communications, 9439 Key West Ave., Rockville, Md. 20850—(301) 948-0540.

•"The Environment of Medicine" is a report of the AMA's Council on Long Range Planning and Development. It summarizes pervasive themes underlying current environmental trends. It is described as containing critical information for physicians. $10, with 10% discount for AMA members. Write AMA, P.O. Box 10946, Chicago 60610.

•"The Cocaine Epidemic" is the title of Public Affairs Pamphlet 633. The author, Michael H. K. Irwin, M.D., explains what cocaine is and how it works; describes its harmful effects and dangers, including its potential for addiction; and summarizes various approaches to treatment of users and abusers. He also discusses efforts to control the cocaine supply and cocaine trafficking and suggests preventive educational measures appropriate for home, school and the workplace. $1 per copy. Write Public Affairs Committee, 381 Park Ave. South, New York, N.Y. 10016.

•The American Council on Science and Health reports on the possible health implications associated with the inclusion of subtherapeutic levels of penicillin and the tetracyclines in animal feed. The situation has been and still is controversial. A study by the U.S. Centers for Disease Control (CDC) of a group of 18 cases of human salmonellosis, upon critical review, raises, in the view of other scientists, the conclusion that the 18 cases were not caused by subtherapeutic doses of antibiotics and probably are an example of human infection by antibiotic-resistant microorganisms. Animal feed with subtherapeutic amounts of antibiotics is withheld from the animals for several days before slaughter, thus eliminating trace amounts of antibiotics from human food sources. To obtain a complimentary copy of "Antibiotics in Animal Feed: A Threat to Human Health?" send a self-addressed, stamped (39¢), business size envelope to ACSH, 47 Maple St., Summit, N.J. 07901.

Calendar Reminder: ISMA Convention

The ISMA's annual convention will be conducted at the Century Center in South Bend, Wednesday through Sunday, Nov. 13-17.

Hotel accommodations for the convention will be in the South Bend Marriott Hotel. Watch your mail for convention registration information.



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NEWS NOTES

New ISMA Members

The following physicians were welcomed in June as new members of the Indiana State Medical Association:

Marlene A. Aldo-Benson, M.D., Indianapolis, rheumatology.

Sharon P. Andreoli, M.D., Indianapolis, pediatric nephrology.

Dale M. Apodaca, M.D., Indianapolis, diagnostic radiology.

David M. Barnes, M.D., Goshen, family practice.

Mary L. Bates, M.D., Noblesville, anesthesiology.

Merrill D. Benson, M.D., Indianapolis, allergy.

Jerry M. Bergstein, M.D., Indianapolis, pediatrics.

Ira K. Brandt, M.D., Indianapolis, pediatrics.

John R. Capurro, M.D., South Bend, family practice.

Andre C. Chester, M.D., Indianapolis, clinical pathology.

Jayne F. Croghan, M.D., Indianapolis, emergency medicine.

Robert V. DeRossi, M.D., Indianapolis, clinical pathology.

Joel D. Eisenberg, M.D., LaPorte, internal medicine.

Douglas W. Elliott, M.D., Elkhart, family practice.

Margaret M. Gaffney, M.D., Indianapolis, dermatology.

Dale E. Gillan Jr., M.D., Elkhart, general surgery.

Michael P. Golden, M.D., Indianapolis, pediatrics.

Sudha Gupta, M.D., Indianapolis, pediatrics.

Mark P. Hodgkin, M.D., Indianapolis, family practice.

Paul W. Kruse, M.D., Indianapolis, internal medicine.

Wai H. Lee, M.D., Elkhart, cardiovascular diseases.

Thomas J. Linnemeier, M.D., Indianapolis, internal medicine.

INDIANA STATE MEDICAL ASSOCIATION

Richard E. Lowe, M.D., Beech Grove, diagnostic radiology.

John J. Mathis, D.O., Vincennes, radiology.

Donald W. McCloskey, M.D., Indianapolis, hematology.

Sara H. Murphy, M.D., Carmel, obstetrics and gynecology.

Debra J. Myers, M.D., Indianapolis, pulmonary diseases.

Arden C. Pletzer, M.D., Noblesville, physical medicine & rehabilitation.

Mark G. Richards, M.D., Carmel, family practice.

Danny C. Sardon, M.D., Michigan City, general surgery.

Dale M. Schulz, M.D., Indianapolis, clinical pathology.

Correction

Dr. Jacqueline A. O'Donnell's name was misspelled in the June listing of "New ISMA Members." Dr. O'Donnell, Indianapolis, specializes in cardiovascular diseases.

Richard H. Seall, M.D., Granger, emergency medicine.

Gregory D. Sides, M.D., Danville, emergency medicine.

Louis F. Star, M.D., Indianapolis, obstetrics and gynecology.

Nancy L. Swigonski, M.D., Indianapolis, pediatrics.

Gordon H. Twedt, M.D., Crawfordsville, diagnostic radiology.

Marvin E. Vollmer, M.D., Indianapolis, neurology.

Stephen E. Zucker, M.D., South Bend, plastic surgery.

Residents:

William A. Argus, M.D., Iowa City, Iowa, ophthalmology.

Edward F. Baines, M.D., Indianapolis, anesthesiology.

Morgan Barrett, M.D., Indianapolis, family practice.

Scott N. Beall, M.D., Indianapolis, anesthesiology.

Thomas G. Belt, M.D., Indianapolis, diagnostic radiology.

Ronald A. Bennett, M.D., Indianapolis, internal medicine.

Daniel G. Blomenberg, M.D., Indianapolis, pediatrics.

Robert J. Boeglin Jr., M.D., Indianapolis, family practice.

C. Gilberto Brito, M.D., Indianapolis, urological surgery.

Stephen G. Brueggermann, M.D., Indianapolis, ophthalmology.

Kevin M. Cantwell, M.D., Carmel, internal medicine.

Jeffrey A. Clingman, M.D., Indianapolis, orthopedic surgery.

Toya J. Corbitt, M.D., Indianapolis, pediatrics.

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Bruce R. Durell, M.D., Plainfield, family practice.

Carol C. Eisenhut, M.D., Indianapolis, pathology.

John F. Fallon, M.D., Indianapolis, otorhinolaryngology.

Christopher J. Faux, M.D., Fort Wayne, family practice.

John M. Furry, M.D., South Bend, family practice.

John N. Giesel, M.D., Indianapolis, family practice.

Todd G. Guttman, M.D., Indianapolis, emergency medicine.

Harriet A. Hamer, M.D., Fort Wayne, emergency medicine.

Tracy A. Hampton, M.D., Indianapolis, general surgery.

Jack Harris II, M.D., Indianapolis, internal medicine.

William A. Heisel III, M.D., Indianapolis, pediatrics.

Julian C. Heitz, M.D., Indianapolis, therapeutic radiology.

Julie A. Hirsch, M.D., Indianapolis, obstetrics and gynecology.

Patricia J. Holzemer, M.D., Indianapolis, pediatrics.

Diane L. Horning, M.D., Indianapolis, emergency medicine.

Gordon M. Hughes, M.D., Muncie, family practice.

Debbie M. Hulbert, M.D., Indianapolis, pediatrics.

Emily L. Hungerford, M.D., Indianapolis, internal medicine.

Tod C. Huntley, M.D., Indianapolis, otorhinolaryngology.

Kathleen A. Jackson, M.D., Indianapolis, internal medicine.

Andrew A. Johnstone, M.D., Beech Grove, family practice.

Jeff A. Jones, M.D., Indianapolis, general surgery.

Brenda B. Jurich, M.D., Indianapolis, radiology.

Emilio M. Justo, M.D., Indianapolis, family practice.

Mark A. Kirk, M.D., Indianapolis, emergency medicine.

Michael A. Kuharik, M.D., Indianapolis, radiology.

Robert L. Larew, M.D., Indianapolis, ophthalmology.

Howard W. Levitin, M.D., Indianapolis, emergency medicine.

Rolf C. Loescher, M.D., Indianapolis, obstetrics and gynecology.

Edward J. Loughery, M.D., Indianapolis, family practice.

CONTINUED ON NEXT PAGE

Resident Physician Essay Contest

During the 1985-86 resident training year the Resident Medical Society of the ISMA and INDIANA MEDICINE will conduct a medical essay contest. All members of the Resident Medical Society are eligible to enter. Each author may choose the subject. Essays (medical articles) will be limited in length to 10 pages of typescript, properly margined and double spaced. Illustrations are encouraged and are to be included in the space limitation.

Entries should be mailed to INDIANA MEDICINE, 3935 N. Meridian St., Indianapolis 46208, and be postmarked prior to Jan. 1, 1986.

Judges will consist of two specialists within the field of the article, three medical education directors from Indiana institutions with approved residency training programs, and one member of the INDIANA MEDICINE Editorial Board.

Authors of the articles judged to be the four best will receive prizes of $100 each, and an additional $100 prize will be given to the best article of the four.

All prize-winning articles will be published in INDIANA MEDICINE. It is hoped that space will allow the publication of other entries to be chosen in the order of their numerical scores.

Essays will be judged on the following criteria:

SCIENTIFIC MERIT: Research methods, data analysis, subject or patient population selection, control of variables, literature analysis.

APPLICABILITY: Usefulness of results to private practitioner, academician, researcher.

CONTENT: Depth of analysis, continuity of discussion supporting the main thesis, feasibility of conclusions.

INNOVATION: Uniqueness of idea, creativity, improvement of existing techniques, previously undiscovered data, advancement of basic understanding.

Each essay will be assigned a numerical score for each of the four judging criteria by each judge as follows:

0 Unacceptable	3 Good
1 Poor	4 Above average
2 Fair	5 Excellent

NEWS NOTES

New ISMA Members Residents:

CONTINUED FROM PAGE 805

Dean C. Maar, M.D., Greenwood, orthopedic surgery.

Robert L. Madden, M.D., Indianapolis, general surgery.

Ferdinand J. Manahan, M.D., Munster, internal medicine.

Cecelia L. May, M.D., Indianapolis, internal medicine.

Lynda W. McCollum, M.D., Indianapolis, pediatrics.

Patricia Medina, M.D., Indianapolis, obstetrics and gynecology.

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Kirk P. Morey, M.D., Indianapolis, ophthalmology.

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Mary P. Newton, M.D., Indianapolis, pediatrics.

Eric W. Peterson, M.D., Indianapolis, internal medicine.

Michael J. Reilly, M.D., Indianapolis, family practice.

William D. Rheuble, M.D., Muncie, family practice.

David J. Rippe, M.D., Indianapolis, radiology.



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Charles R. Wesley, M.D., Indianapolis, ophthalmology.

Linda Williams, M.D., Indianapolis, obstetrics and gynecology.

Michael A. Williams, M.D., Indianapolis, neurology.

Louis L. Winternheimer, M.D., Indianapolis, family practice.

Gregory C. Zandstra, M.D., Indianapolis, anesthesiology.

Transplant Hotline

The North American Transplant Coordinators Organization (NATCO) is publicizing the installation of a Hotline for those seeking organ donation information. The Hotline also serves hospitals and medical professionals with information on availability of transplantable organs. The telephone number of the Hotline is 800/24-DONOR. Calls are answered day and night.

Deferred Doses of DTP Vaccine to be Administered

The State Board of Health has reinstated the regular Diphtheria-Tetanus-Pertussis vaccine schedule. Production and distribution of ample supplies of the triple vaccine is now sufficient to warrant administration of the 4th and 5th doses. Additionally, children for whom the 4th and 5th doses were deferred should be recalled by the provider to administer the deferred doses.

$721,040 Awarded to Patient with GBS

A patient was entitled to an award of $721,040 for damages she suffered from Guillain-Barre Syndrome after a swine flu vaccination, a federal trial court in Indiana has ruled.

The patient's symptoms began three weeks after receiving a swine flu vaccination. Every physician who saw her over the next two years diagnosed her condition as GBS. Stating that the law and the evidence were both on her side, a trial court awarded her $721,040 in damages. It awarded $218,400 for lost income; $2,640 for special orthopedic shoes necessary for her in the future; $100,000 for special nursing care; and $400,000 for pain and suffering, disfigurement, and permanent loss of bodily functions.—*Grubbs v. U.S.*, 581 F. Supp. 536 (D.C., Ind., Feb. 29, 1984)

'Heartbeat' Wins Award

"Heartbeat," a recent series of half-hour public education television programs produced in cooperation with the Indiana State Medical Association, has won an award of excellence.

The "Bronze Quill Award" was presented by the Fort Wayne Chapter, International Association of Business Communicators (IABC). Dr. Adrian R. Lanning, chairman of the ISMA Commission on Public Relations, recently presented the plaque to the Board of Trustees.

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OBITUARIES

Alexander W. Cavins, M.D.

Dr. Cavins, 85, a retired Terre Haute gynecologist who was associated with INDIANA MEDICINE for 36 years, died July 28 at his home.

He became the state medical journal's consulting (then called "associate") editor in 1949. He retained that position until his death.

Dr. Cavins, who retired from practice in 1976, was a 1925 graduate of Johns Hopkins University School of Medicine and was an Army veteran of World War I. He was a founding fellow of the American College of Obstetrics and Gynecology and was a life fellow of the American College of Surgeons.

He was certified by the American Board of Obstetrics and Gynecology in 1943. He served several years during the 1960s as an ISMA trustee (councilor), representing the Fifth Medical District. He was a member of the Terre Haute Academy of Medicine and a member of the ISMA Fifty Year Club.



Dr. Cavins

Berniece M. Williams, M.D.

Dr. Williams, 79, a retired Fort Wayne general practitioner, died June 25 at Lutheran Hospital, Fort Wayne.

She was a 1934 graduate of Indiana University School of Medicine.

Dr. Williams, a former president of the Fort Wayne Board of Health, was a member of the American Academy of Family Physicians. She was enrolled in the ISMA Fifty Year Club last year.

Richard A. Snapp, M.D.

Dr. Snapp, 60, a Columbus internist, died Aug. 9 at Bartholomew County Hospital.

He was a 1951 graduate of Indiana University School of Medicine and a World War II veteran.

Dr. Snapp was a former chief of the internal medicine department at Bartholomew County Hospital and was a past president of the Bartholomew-Brown County Medical Society. He founded an Indianapolis computerized medical history firm in 1971. He was a member of the American Society of Internal Medicine.

George E. Gates, M.D.

Dr. Gates, 71, a retired South Bend internist, died July 13 at Memorial Hospital, South Bend.

He was a 1936 graduate of the University of Rochester (N.Y.) School of Medicine and was an Army veteran of World War II. He retired in 1981.

Dr. Gates was a former president of the St. Joseph County Medical Society. He was a member of the American College of Physicians and was a diplomate of the American Board of Internal Medicine.

Don A. Sears, M.D.

Dr. Sears, 66, an Odon general practitioner, died July 27 at Daviess County Hospital, Washington.

He was a 1944 graduate of Indiana University School of Medicine and served in the Army during the Korean War.

Dr. Sears was a member of the American Academy of Family Physicians.

Peter V. Westhaysen, M.D.

Dr. Westhaysen, 70, a retired Munster neurosurgeon, died July 7 at St. Catherine Hospital, East Chicago.

He was a 1941 graduate of Harvard Medical School.

Dr. Westhaysen was a member of the Congress of Neurological Surgeons and the American Association of Neurological Surgeons. In addition, he was a diplomate of the American Board of Neurological Surgery.

Gerald S. Young, M.D.

Dr. Young, 79, a retired Muncie pediatrician, died July 2 at Ball Memorial Hospital.

He was a 1931 graduate of Indiana University School of Medicine and was an Army-Air Corps veteran of World War II.

Dr. Young was a member of the American Academy of Pediatrics and the Indiana Pediatric Society. He was enrolled in the ISMA Fifty Year Club in 1981.

Memorials: Indiana Medical Foundation

The Indiana Medical Foundation, Inc. was formed by the Indiana State Medical Association "for religious, charitable, scientific, literary or educational purposes." It provides financial assistance to support the educational mission of INDIANA MEDICINE.

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Indiana State Medical Association

This Printing Incorporates Amendments of the 1984 House of Delegates

Indiana State Medical Association
3935 North Meridian Street
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CONSTITUTION

Article I - Title and Definition

The name of this organization is the Indiana State Medical Association. It is the federacy of Indiana county medical societies.

Article II - Purposes

The purposes of this Association shall be to federate and bring into one compact organization the medical profession of the state of Indiana, and to unite with similar societies of other states to form the American Medical Association; to extend medical knowledge and advance medical science; to elevate the standard of medical education; to promote friendly relations among physicians; to protect its members against imposition; and to enlighten and direct public opinion in regard to the great problems of medical care and public health so that the profession shall become more capable and honorable within itself and more useful to the public in the prevention and cure of disease and in prolonging and adding comfort to life.

Article III - Component Societies

Component societies are those county and district medical societies contained within the state of Indiana, and who hold charters from this Association.

Article IV - Members

The Indiana State Medical Association is composed of individual members of county medical societies and others as shall be provided in the Bylaws.

Article V - House of Delegates

The legislative and policy-making body of the Association is the House of Delegates composed of elected representatives and others as provided in the Bylaws. The House of Delegates shall transact all business of the Association not otherwise specifically provided for in the Constitution and Bylaws and shall elect the general officers, except trustees, as otherwise provided in the Bylaws.

Article VI - Officers

The general officers of the Association shall be a president, president-elect, immediate past president, treasurer, assistant treasurer, speaker, vice speaker, trustees and the executive director. Their qualifications and terms of office shall be provided in the Bylaws.

Article VII - Trustees

The Board of Trustees is composed of trustees and alternate trustees elected by the component district medical societies, and the president, the president-elect, treasurer, immediate past president, the assistant treasurer, with power to vote only in the absence of the treasurer, and the speaker and vice speaker without power to vote and the executive director without power to vote. The alternate trustees have power to vote only in the absence of the trustee.

The Board of Trustees shall have charge of the property and financial affairs of the Association and shall perform such duties as are prescribed by the law governing directors of corporations or as may be prescribed in the Bylaws.

Article VIII - The Convention

The House of Delegates and the general scientific program shall be convened annually and at such other times as deemed necessary or as provided in the Bylaws, in cities recommended by the Board of Trustees and approved by the House of Delegates.

Article IX - Funds, Dues and Assessments

Funds may be raised by annual dues or by assessment of the active members on recommendation of the Board of Trustees and after approval by the House of Delegates, or in any other manner approved by the Board of Trustees as provided in the Bylaws.

Article X - Amendments

The House of Delegates may amend this Constitution at any convention provided the proposed amendment shall have been introduced at the preceding annual convention and provided two-thirds of the voting members of the House of Delegates vote approval and provided that it shall have been published twice during the year in INDIANA MEDICINE.

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BYLAWS

OF THE

INDIANA STATE MEDICAL ASSOCIATION

1.00 MEMBERSHIP - QUALIFICATIONS, ELECTIONS AND RIGHTS

1.01 CATEGORIES: Categories of membership are: 1) Regular; 2) Dues Exempt; 3) Intern and Resident; 4) Medical Student; 5) Distinguished; 6) Honorary.

1.0101 REGULAR MEMBER: The term "Regular Member" as used in these Bylaws shall be: 1) A person who holds the degree of Doctor of Medicine or Bachelor of Medicine, or who holds an unrestricted license to practice medicine. 2) A member in good standing of a component county society and who has paid to this Association annual dues, provided, however, that 3) the person is a citizen of the United States of America, or has filed the declaration of intention of becoming a citizen and the first citizenship papers are in full force and effect.

1.0102 DUES EXEMPT MEMBER: The term "Dues Exempt Member" as used in these Bylaws shall include the following:

1.010201 Senior Member. Senior Members shall be eligible for Senior Membership on January 1 following their 70th birthday and they shall be physicians of the state of Indiana and who have held their membership in the Indiana State Medical Association for 20 years or more; or who have held membership in the Indiana State Medical Association or in some one or more other like state organization(s) which is a component state organization of the American Medical Association, for a combined total of 20 years or more, and who, upon their application, have been certified to the Executive Director as eligible for such membership by the county societies of which they are members. It shall be the duty of the county medical society to verify, through the office or offices of any other state organization or organizations, the fact of membership therein when such membership is claimed as part compliance with the eligibility requirement of 20 years of membership.

1.010202 Disabled Member. Disabled Members shall consist of physicians of the state of Indiana who are certified by a member physician to be permanently disabled and no longer able to practice medicine. Proof of permanent disability shall be by notification to the Executive Director of the Association by the secretary of the county medical society in which the permanently disabled physician holds membership.

1.010203 **Inactive Membership.** Members who decide voluntary inactivity prior to the age of 70 shall be exempt from payment of membership dues for the duration of their inactive status when notification is received by the Executive Director of the Association from the secretary of the county medical society in which such inactive member holds membership. In deciding whether to approve a member's eligibility the county medical society shall determine that the member has ceased the practice of medicine in the state of Indiana.

1.010204 **Financial Hardship.** In the event the county relieves a member from the payment of dues because of financial hardship, the secretary of the county medical society shall recommend in writing to the Executive Director of ISMA the relief from State Association dues of said member of the society, showing why such recommendation should be granted.

1.0103 **INTERN AND RESIDENT MEMBER:** Interns and Residents who hold membership in the Indiana State Medical Association shall have all the rights and privileges of this Association.

1.0104 **MEDICAL STUDENT MEMBER:** Medical students who attend an accredited medical school in Indiana are members of this Association. Student members may subscribe to INDIANA MEDICINE.

Medical Student Members may be represented in the House of Delegates with the power to vote. Medical student members may hold office as stated in 3.0212. They shall be entitled to send one student delegate or one student alternate delegate to the House of Delegates. Student Delegate and Alternate are to receive INDIANA MEDICINE free of charge.

1.0105 **DISTINGUISHED MEMBER:** Members who have fulfilled the American Medical Association's Physician Recognition Award requirements of 150 hours for three years of continuing medical education as a minimum shall be designated as Distinguished Members.

1.0106 **HONORARY MEMBER:** Honorary Members shall consist of physicians, teachers, scientists and others of distinction who have rendered highly meritorious service to the profession of medicine, upon whom the Association may, through action of the House of Delegates, desire to bestow such membership as a special honor. Honorary members hereafter shall hold such membership as an honor and distinction and by invitation may attend meetings of the Association. They shall not be required to pay dues in the State Association. Such honor may only be bestowed by a vote or acclamation of the House of Delegates.

1.02 **QUALIFICATIONS:** The Regular, Dues Exempt, Distinguished and Resident Members of this Association shall be the members of the component county medical societies and no county medical society shall grant membership therein on a basis that does not include membership in the district medical society and in the Indiana State Medical Association.

1.03 RIGHTS, PRIVILEGES AND RESPONSIBILITIES OF MEMBERS:

1.0301 Rights and Privileges by Membership Category: All members of ISMA may attend the Annual Convention. With the exception of Honorary Members, all ISMA members are eligible to vote and hold office as specified elsewhere in these Bylaws. Medical Student Members may participate in the democratic process as defined in 1.0104.

1.0302 Attendance at Annual Convention: Members attending the Annual Convention and other meetings shall register by indicating the component society of which they are members. At the Annual Convention when membership has been verified, by reference to the roster (students excepted) of members, they shall receive a badge which shall be evidence of their right to all the privileges of membership at that convention. Members may not take part in any of the proceedings of an Annual Convention until they have complied with the provisions of this section.

1.0303 Suspension or Revocation of License: No person whose license to practice medicine has been suspended or revoked or who is under sentence of suspension or expulsion from a component society, or whose name has been dropped from its roll of members, shall be entitled to any of the rights or benefits of this Association or of a component county society, or shall said person be permitted to take part in any of their proceedings until the license and/or county membership has been restored. This shall not apply to physicians who have surrendered their license because of retirement under the provisions of the Medical Practice Law.

2.00 INCOME AND EXPENSES

2.01 INCOME: Funds for carrying on the activities of the Association shall be raised by the following means:

2.0101 Dues: Membership dues to be collected may be collected by the Indiana State Medical Association or by the component county societies. The amount of dues of each component society shall be fixed by the society itself, and the amount of dues for this Association shall be fixed from time to time by the House of Delegates.

Dues are payable by January 15, and become delinquent on that date. The Board of Trustees shall have the power to suspend any member who has not paid dues in full by April 30. The member shall sacrifice all rights and privileges of membership of this Association until said annual dues are received in full by the Indiana State Medical Association.
For new members joining ISMA, dues will be calculated on a pro-rated monthly basis.

2.010101 Dues Refund: A request for refund of dues will be acted upon by the Board of Trustees of the Indiana State Medical Association in its wisdom. A letter of certification from the county society secretary to the Executive Director of

the Indiana State Medical Association to request an exemption of dues must state that the county is also exempting said dues. Upon request and approval, dues will be refunded on a monthly pro-rata basis. Dues Exempt members may receive INDIANA MEDICINE upon payment of the applicable subscription price set by the ISMA Board of Trustees. With the exception of Senior Members, all Dues Exempt Members will be reviewed annually, to determine their eligibility, by their county medical societies.

2.010102 **Reduced Dues:** The Indiana State Medical Association dues for Regular Members in their first year of practice following formal training shall be one-half the amount as may be established by the House of Delegates. County medical societies are encouraged to follow the same policy.

2.010103 **Change in Dues Structure:** The final vote on any issue calling for changes in dues or in dues structure shall be by roll call vote of the House of Delegates. Each member's vote shall be permanently recorded.

2.0102 **Voluntary contribution.**

2.0103 **Revenues derived from the Association's publications.**

2.0104 **Revenue derived from ISMA activities or services approved by the Board of Trustees.**

2.0105 **Assessments approved by the House of Delegates.**

2.02 **EXPENSES:** Funds shall be appropriated by the Board of Trustees to defray the expenses of the Association, for publications, and for such other purposes as will promote the welfare of the profession. All motions and resolutions recommending the appropriation of funds by the House of Delegates must be referred to the Executive Committee for recommendation before final action is taken by the House of Delegates.

3.00 CONVENTION AND MEETINGS

3.01 **ANNUAL CONVENTION:** The Association shall hold a Convention at least annually during which the business and legislative sessions of the House of Delegates shall be held.

3.0101 **Selection of Site:** The House of Delegates shall select the place five years in advance of holding the Annual Convention. The time for the Convention shall be fixed by the Board and the Board shall have the power also to change the place for holding the Convention where conditions may create difficulties in holding a successful Convention at the place designated by the House of Delegates. Any of the component member county societies wishing to invite the Indiana State Medical Association to hold its Annual Convention in its locality shall submit an invitation in writing at least five years in advance to the Board of Trustees. The Board of Trustees shall make an investigation of the facilities and in turn make a recommendation for the location of the Annual Conventions for concurrence by the House.

3.02 BUSINESS AND LEGISLATION MEETINGS - HOUSE OF DELEGATES
(Referred to elsewhere in these Bylaws as House)

3.0201 Composition: The House of Delegates shall be the legislative and policymaking body of the Association and shall consist of voting and non-voting members.

Only members of the House of Delegates are entitled to speak on the floor of the House except as defined in 3.0210.

3.020101 Voting Members: 1) Delegates or the designated Alternates, elected by the component county societies; 2) Trustees or the designated Alternates, 3) Speaker, 4) Vice-Speaker, 5) Past Presidents.

3.020102 Non Voting Members: 1) The Section Delegate or designated Alternate Section Delegate elected by the respective section shall also be a member, 2) President, 3) President-Elect, 4) Executive Director, 5) Treasurer, 6) Assistant Treasurer, 7) the Delegates and Alternate Delegates to the American Medical Association.

3.020103 No delegate member of the House shall lose the right to vote by virtue of any office that delegate may hold.

3.0202 Parliamentarian: The Speaker may appoint a Parliamentarian for the Annual Convention, who need not be a member of the House and who shall advise the House on parliamentary matters, without voting privileges as Parliamentarian.

3.0203 Meetings

3.020301 Regular Meetings: The House of Delegates may meet on the day before the date set for the beginning of the general registration of the attendance at the Annual Convention. It may recess from time to time as may be necessary to complete its business, provided that its hours shall conflict as little as possible with the general or section meetings. It shall meet on the last day of the Annual Convention for the election of officers for the ensuing year and for the completion of any business previously introduced. The order of business shall be arranged as a separate section of the program. Nominations for officers of the Association may be made at any session of the House of Delegates.

3.020302 Special Meetings: Special meetings of the House of Delegates shall be called by the President upon a petition signed by thirty (30) delegates. The signed petition shall contain the names of at least ten (10) delegates from each of at least three (3) Trustee Districts. The President shall issue a call for same as described in 3.0404, second paragraph.

3.0204 **House Admission:** All sessions of the House of Delegates shall be open to all members in good standing of this Association for observation.

3.0205 Delegate Apportionment: Each component county society *and the RMS shall be entitled to send to the House of Delegates each year one delegate for every fifty members and one for each major fraction thereof, but irrespective of the number of members, each component society which has made its annual report and paid its assessments, as provided in this Constitution and Bylaws, shall be entitled to one Delegate, except that where a component society is made up of physicians of more than one county each county shall be entitled to at least one Delegate and one Alternate Delegate who shall be a resident of the county represented as a Delegate and who shall be selected by the physicians residing in such county. The Student Delegate shall be seated with full power to vote. In the absence of the Student Delegate, the Alternate Student Delegate shall be seated with full power to vote.

3.020501 **Method of Determination of the Number of Delegates:** The number of Delegates to which each component society is entitled shall be based upon the number of members in good standing with dues fully paid as of December 31 of the preceding year.

*Pending final approval of verbiage by 1985 House of Delegates.

3.020502 **Section Delegates:** All sections listed in 3.0303 of these Bylaws and which are in compliance with 3.0302 and 3.0306 of these Bylaws shall be entitled to send to the House of Delegates each year one Delegate or Alternate Delegate with all rights and privileges except the power to vote.

3.020503 **Delegate Credentials:** The names of duly elected Delegates and Alternates from each component society shall be sent to the Executive Director of this Association on or before February 1, prior to the Annual Convention at which such Delegates are to serve. No one shall be entitled to a seat in the House of Delegates unless a credential card as a Delegate or Alternate, properly signed by the Secretary of the appropriate county medical society or the Executive Secretary or Executive Director of the larger societies, is presented to the Committee on Credentials at the time of the Annual Convention.

3.0206 **Quorum:** Fifty (50) Delegates shall constitute a quorum.

3.0207 **Authority and Responsibilities:**

3.020701 **Resolutions and Proposals:** The House of Delegates shall approve all memorials and resolutions issued in the name of the Association before same shall become effective.

3.020701a **Fiscal Note:** Proposals calling for appropriation of funds by the House of Delegates shall be accompanied by a fiscal note and shall be submitted to the Executive Committee and the Board for review, presentation and recommendation for final action of the House. No proposal calling for appropriations shall be considered if not accompanied by a fiscal note.

3.020701b **Deadlines for Resolutions:** Except as noted in 3.020701c and in 3.021102, all resolutions to be presented to the House of Delegates for action shall be prepared and mailed to the Executive Director of the Association so that they will be received not later than 45 days prior to the session of the House of Delegates to which the resolutions will be presented for action.

3.020701c **Late Resolutions:** Except for matters of extreme emergent nature, all late resolutions must be received by the Executive Director seven (7) days prior to the opening session of the House of Delegates. Those resolutions received after 45 days prior to the first session of the House of Delegates will be referred to the Committee on Rules and Order of Business. The Committee on Rules and Order of Business shall submit a report to the House concerning all items considered by same with recommendation(s) limited to the appropriateness of consideration of said resolutions.

The Committee on Rules and Order of Business will meet approximately 7 days prior to the Annual Convention to consider resolutions that have been first submitted to the Committee together with a written statement setting forth the reasons why the resolution was not mailed to the Executive Director more than 45 days prior to the first session of the House of Delegates and also setting forth in the written statement the reasons why the resolution is of such an emergency nature that it cannot wait until the next meeting of the House.

The report of the Committee on Rules and Order of Business shall be considered in the same manner as any other reference committee report. The House may accept or reject any recommendation of the Committee, which shall make recommendations on each resolution considered. Discussion on the floor will be limited to one speaker in dissension with the Committee's recommendation. This discussion will be limited to the appropriateness of consideration and not the merits of the resolution itself.

If the House in considering the report of the Committee on Rules and Order of Business, determines it is appropriate to consider said resolution for submission to the House and that each Delegate shall be furnished a copy then subsection 3.020701b of these Bylaws may be suspended upon a two-thirds vote of the House of Delegates.

3.0208 **Election of Delegates to the American Medical Association:** The House of Delegates shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and Bylaws of that body.

Upon expiration of an AMA Delegate's or Alternate Delegate's term, election of a qualified member shall be accomplished to fill each specific vacancy thereby created. An AMA Delegate and Alternate Delegate may succeed himself in office or be elected to fill any other vacancy in the delegation.

In the event of a permanent vacancy occurring among the AMA Delegates, the remaining elected Delegates and Alternates to the AMA shall meet and nominate one of the Alternates to assume the vacancy until the next meeting of the Indiana State Medical Association House of Delegates, at which time the House will fill such vacancy. The nominated member proposed by the AMA delegation shall be subject to the confirmation of the Board of Trustees.

3.0209 **Organizing Districts:** The House of Delegates shall provide for the organization of such Trustee District Societies as will promote the best interests of the profession, such societies to be composed exclusively of members of component county societies. Trustee districts shall be defined by the House of Delegates. The House shall divide the state into Trustee Districts, specifying which counties each district shall include, and when the best interest of the Association and profession will be promoted thereby, organize in each district a medical society, and all members of component county societies, and no others, shall be members of such district societies.

3.0210 **Authority to Appoint Special Committees:** The House shall have the authority to appoint committees for special purposes from among members of the Association who need not be members of the House of Delegates. Such committees shall report to the House of Delegates, and the members of such committees may be present and participate on the floor in the debate of their reports.

3.0211 **Reference Committees and Committee on Rules and Order of Business:**

3.021101 **Reference Committees:** Immediately after the organization of the House of Delegates at each Annual Convention, the Speaker shall announce the membership of the Reference Committees to serve during the convention for which they are appointed.

Appointments to these Reference Committees shall be made by the Speaker. The Chairman of each committee shall also be appointed by the Speaker. The Speaker shall also appoint such additional House committees as the House may approve. All committees hereunder shall serve only during the convention at which they are appointed. Appointments shall be made in time to be published in INDIANA MEDICINE and the Handbook prior to such Annual Convention. The Speaker

shall have the power to appoint substitutes from among members present for absent appointees. Each committee shall consist of at least five ISMA members, three of whom including the chairman, shall be delegate-members of the House. To these committees shall be referred all reports, resolutions, measures and propositions presented to the House of Delegates, except matters as properly come before the Board, and the recommendations of these committees shall be submitted to the next session of the House of Delegates for acceptance in the original or modified form or for rejection.

3.021102 **Responsibilities of Reference Committees:** Four or more Reference Committees designated by numerals are hereby constituted to which all matters shall be referred, at least one of which shall be organized for the sole purpose of studying the addresses of the President; President-Elect; report of the Executive Director; and Chairman of the Board of Trustees. This Committee shall be expected, as it deems appropriate, to translate recommendations made by these officers through resolutions for presentation to the House. Where a report, resolution, measure or proposition deals with more than one subject matter, reference thereof, may at the discretion of the Speaker of the House, be made (a) to as many Reference Committees as are necessary to cover all subjects included therein; or (b) to only one Reference Committee which the Speaker deems has within the scope of its reference the most important part of the matter referred. No report of any Reference Committee shall be rejected on the ground that it covers something not included in the matters which such Committee was created to consider.

3.021103 **Time and Place of Meetings:** The time and place of meetings of all Reference Committees shall be publicly posted, and all meetings of all Reference Committees shall be open only to members of this Association. Officers and chairmen of all commissions and committees whose reports are referred to Reference Committees are expected to appear and be heard before the respective committees to which such references are made in regard to their reports.

3.021104 **Non-Member Attendance:** Persons who are not members of the Indiana State Medical Association and seek to appear and present their technical or reference material to the Reference Committee must receive approval to appear on that specific subject from the Reference Committee Chairman. Such persons must register as guests at the committee and be at the call of the Reference Committee Chairman for testimony, after which they may be excused from further attendance.

3.021105 **Committee on Rules and Order of Business:** The Committee on Rules and Order of Business shall be composed of the Chairmen of the various Reference Committees appointed by the Speaker. This committee shall be charged with the duties as set forth in 3.020701c of these Bylaws.

3.0212 **Election of Officers:** The officers of this Association with the exception of the Executive Director and the Board of Trustees shall be elected by the House of Delegates, as the first order of business at the final session of the House of Delegates, and no person shall be elected to any such office who has not been an active member of the Association for the preceding two years. The officers except the Executive Director and the Trustees shall be elected annually. All officers shall serve until their successors are elected and installed.

3.021201 **Method of Election:** All elections shall be by ballot and a majority of the votes cast shall be necessary to elect. In case no nominee receives a majority on the first ballot, the nominee receiving the lowest number of votes shall be dropped and a new ballot taken.

3.021202 **Terms:** The President, President-Elect, Speaker, Vice-Speaker, Treasurer and Assistant Treasurer shall serve from the termination of the annual meeting of the House of Delegates in which all but the President are elected until the termination of the succeeding annual meeting of the House of Delegates.

3.021203 **Oath:** The officers of the Association shall be installed by taking the following oath of office to be administered by the out-going President of the Association at the final session of the House of Delegates:

> I, _____, solemnly swear that I shall carry out to the best of my ability, the duties of the office of the Indiana State Medical Association to which I have been elected.
>
> I shall strive constantly to maintain the ethics of the medical profession and to promote the public health and welfare. I shall dedicate myself and my office to improving the health standards of the American people and to do the task of bringing increasingly improved medical care within the reach of every citizen.
>
> I shall uphold the Constitution of the United States of America and of the state of Indiana, the Constitution and Bylaws of the Ameican Medical Association and the Constitution and Bylaws of the Indiana State Medical Association at all times.
>
> I shall champion the cause of freedom in medical practice and freedom for all my fellow Americans. To these duties and obligations, I pledge myself, so help me God.

3.03 MEETINGS OF SPECIALTY SECTIONS

3.0301 **Purpose:** The purpose of Specialty Sections of ISMA is to provide a forum in ISMA and the House of Delegates, to have an active input into the scientific meeting, to introduce resolutions and have a voice on the floor of the House.

3.0302 Meetings: Each section will be required to have a minimum of one meeting annually. Minutes of the meeting will be required. A copy of the minutes and the names of the officers shall be forwarded to the Speaker of the House and will become a permanent record of the House.

3.0303 Official Sections: During the Annual Convention the Association, in addition to the general meetings, may hold the following section meetings:

3.030301 Allergy
3.030302 Anesthesia
3.030303 College Health Physicians
3.030304 Cutaneous Medicine
3.030305 Directors of Medical Education
3.030306 Emergency Medicine
3.030307 Family Physicians
3.030308 Internal Medicine
3.030309 Medical Directors and Staff Physicians of Nursing Facilities
3.030310 Neurological Surgery
3.030311 Neurology
3.030312 Nuclear Medicine
3.030313 Obstetrics and Gynecology
3.030314 Ophthalmology
3.030315 Orthopedic Surgery
3.030316 Otolaryngology, Head and Neck Surgery
3.030317 Pathology and Forensic Medicine
3.030318 Pediatrics
3.030319 Preventive Medicine and Public Health
3.030320 Psychiatry
3.030321 Radiology
3.030322 Surgery
3.030323 Urology

3.0304 Formation of Sections: Any future section can only be formed by a properly constituted resolution and shall include the signatures of a minimum of 15 members or 25% of the members, whichever is greater, who are practicing that specialty in the state of Indiana. The resolution shall be subject to the decision of the House of Delegates.

3.0305 Officers: The officers of each section shall be a Chairman, a Vice-Chairman, and a Secretary, and they shall preside over the meetings of the section and shall be responsible to the Commission on Convention Arrangements for the section speakers and papers.

3.0306 Officer Elections: The election of officers shall be held at a meeting of the section annually. The names of the officers shall be forwarded to the Speaker, and will become a permanent record of the House.

3.0307 Restriction on Meetings: No section meeting shall be allowed to conflict with a general meeting.

3.0308 **Failure to Comply:** Any section not complying with the preceding shall not have a delegate in the House.

3.04 MEETINGS FOR THE GENERAL MEMBERSHIP

3.0401 **General Meetings for the Membership:** General Meetings shall mean all meetings planned for attendance by all registered members and shall include those meetings in which guests of registered members or the general public are also invited. The address of the President may be delivered in a General Meeting, and the programs of General Meetings shall be arranged by the Commission on Convention Arrangements, with the sanction and approval of the officers.

3.0402 **Purposes of Meetings for the General Membership:** Meetings of the Association:

3.040201 **Scientific Presentations and Discussions.** (Quorum NOT necessary)

3.040202 **Dissemination of Information of Interest to the General Membership.** (Quorum NOT necessary)

3.040203 **Appointment of Committees:** The General or Section Meetings may recommend to the House of Delegates the appointment of committees or commissions for scientific investigation of special interest and importance to the profession and public. (Quorum NOT necessary)

3.040204 **Issue Mandates to the House:** Matters of vital concern to the general membership may be referred to the House of Delegates who shall act as expeditiously as possible utilizing the usual parliamentary procedures in order to serve the needs of the profession in the most equitable fashion. (QUORUM NECESSARY)

3.040205 **Order Referendums:** As described in 9.01 (QUORUM NECESSARY)

3.0403 **Quorum for General Membership Meetings:** For the purpose of transacting official business, a quorum of 150 members must be present at a General Meeting of the Association.

3.0404 **Special Meetings for the General Membership:** Special Meetings for the general membership shall be called by the President upon receipt of a petition signed by one hundred (100) members representing a minimum of three (3) Trustee districts, with no one district providing more than thirty-four (34) of the required one hundred (100) signatures. Upon receipt by the President of such a petition, the President shall within thirty (30) days thereafter issue a call for such special meeting, and shall state the items of business to be considered, at a time and place fixed by the President. The President, in specifying the time of such special meeting, shall fix the same as soon thereafter as reasonable and suitable arrangements can be made.

4.00 OFFICERS

4.01 COMPOSITION: The officers of this Association shall be a President, a President-Elect, the Immediate Past President, an Executive Director, a Treasurer, an Assistant Treasurer, a Speaker, a Vice-Speaker, each of whom shall be a member, except the Executive Director, who need not necessarily be either a physician or a member.

4.0101 Limitation: The offices of President, President-Elect, the Immediate Past President, Treasurer, Assistant Treasurer, Speaker, Vice Speaker, as well as AMA Delegates, AMA Alternate Delegates, and ISMA Trustees and ISMA Alternate Trustees are major offices. Individuals may not hold more than one major office during a given term and must resign from a major office if they attain a second.

4.0102 Delinquent Dues: A major office holder in ISMA who is delinquent in paying dues will not be allowed to vote in that capacity until annual dues are paid in full.

4.02 REMOVAL, DEATH, RESIGNATION, VACANCY: Any officer may be removed from office after a hearing before the Board on thirty days notice, on charges in writing, upon a vote of three-fourths of the members of the Board.

In the event of the death, resignation, removal or permanent disability of any officer of this Association whose successor is not otherwise provided for in these Bylaws, the vacancy shall be filled by the Board of Trustees until the next official meeting of the House.

The Board shall fill a vacancy in the office of Treasurer or Assistant Treasurer by an election by the Trustees at the next regular meeting of the Board following the occurrence of such vacancy.

4.03 DUTIES

4.0301 President: The President or a member designated by the President shall preside at all general meetings of the Association. The President shall appoint all committees not otherwise provided for; shall appoint the chairman of each commission and committee; shall fill the vacancies resulting from the expiration of terms of members of commissions, and also appoint members to fill the unexpired term where any other vacancy occurs. The President will have the power, with the approval of the Board, to remove any member of any committee or commission as defined in 7.05. Within 60 days after the Annual Convention, the President may call all commissions and committees into a joint meeting as defined in 7.08.

Charters of county societies as defined in 11.01, and component societies, as defined in 12.01, and approved by the Board, shall be signed by the President and Executive Director.

Special meetings of either the Association or the House of Delegates shall be called by the President as defined in 3.020302 and 3.0404 of these Bylaws.

The President shall deliver an annual address and shall perform such other duties as custom and parliamentary usage may require. The President shall be the real head of the profession of the state during the term of office, and as far as practicable, shall visit by appointment the various sections of the state and assist the trustees in building up the county societies and in making their work more practical and useful.

Ex-officio, the President shall be a member, without vote, of all commissions, committees and the Board of Trustees.

4.0302 **President-Elect:** The President-Elect's term of office shall be for one year, at the completion of which the President-Elect succeeds to the presidency. The President-Elect shall assist the President in the discharge of duties. Ex-Officio, the President-Elect shall be a member, without vote, of all commissions and committees.

In the event the office of President is vacant, the President-Elect will assume the office of President.

4.0303 **Treasurer:** The Treasurer shall give bond at the expense of the Association in such an amount as shall be required by the Board unless included in the coverage of a blanket or position bond. The Treasurer shall receive all bequests and donations to the Association and shall demand and receive all funds due the Association in the conduct of its business. The funds of the Association shall be deposited in a depository or depositories designated by the Executive Committee, and withdrawals from such funds shall be made on checks or drafts signed by the Treasurer, the Assistant Executive Director, and/or other officers of the Association as the Executive Committee may designate. The Treasurer shall present to the House of Delegates annually a report of the receipts and expenditures, and the state of funds on hand.

4.0304 **Assistant Treasurer:** The Assistant Treasurer shall give bond at the expense of the Association in such amount as shall be required by the Board unless included in the coverage of a blanket or position bond. In case of death, or incapacity of the Treasurer, the Assistant Treasurer shall succeed to all the duties and rights of the Treasurer until a new Treasurer is elected. In the absence of the Treasurer, the Assistant Treasurer shall attend to the duties and rights of the Treasurer during such absence and shall also perform such duties of the Treasurer as may be delegated and assigned by the Treasurer.

4.0305 **Executive Director:** The Executive Director shall be the directing manager of the Association's headquarters and INDIANA MEDICINE offices, and shall supervise the work of all salaried employees of the Association offices. Such supervision shall be subject to directives from the House of Delegates, the Board, the Executive Committee, and the President of the Association. The Executive Director shall discharge the administrative functions of the

Association not within the duties of other offices or of committees to perform. The Executive Director shall assist, at their request, all offices and committees, and shall keep informed in regard to nonprofessional matters affecting the medical profession, for the purpose of keeping qualified to perform the services herein mentioned. The Executive Director shall be responsible for the execution and carrying out of the policies of the Association and in that connection shall perform all specific tasks required by the committees, the Board and the officers of this Association.

A major office holder whose dues are delinquent will be personally notified of this delinquency by the Executive Director of ISMA.

4.0306 **Speaker:** The Speaker shall be elected annually from the membership of the House. The Speaker shall preside at all meetings of the House of Delegates and shall perform such duties as custom and parliamentary usage require. The Speaker shall have the right to vote as a delegate member of the House.

The Speaker may address the House of Delegates at the opening session of all conventions, limiting the address to matters of conduct and procedure of the House.

The Speaker shall be further charged with the duties as defined in these Bylaws. (e.g., 3.0202, 3.021101, 3.021102 and 3.0302) Ex-officio, the Speaker shall be a member of all commissions and committees and the Board of Trustees of this Association without the power to vote. Training in parliamentary procedure shall be mandatory for the Speaker and shall be provided at the expense of the Association. In the event the offices of President and President-Elect are vacant, the Speaker of the House of Delegates will assume the office pro tem until the next called or regularly scheduled meeting of the House when a President and a President-Elect will be elected.

4.0307 **Vice Speaker:** The Vice Speaker shall be elected annually from the membership of the House. The Vice Speaker of the House of Delegates shall officiate at meetings in the absence of the Speaker or at the request of the Speaker. The Vice Speaker shall have the right to vote as a delegate member of the House. Ex-officio, the Vice Speaker shall be a member of all commissions and committees and the Board of Trustees of this Association without the power to vote. Training in parliamentary procedure shall be mandatory for the Vice Speaker and shall be provided at the expense of the Association.

4.04 EXPENSES: The necessary expenses of the above offices incurred in the line of duty herein imposed shall be allowed for in the budget but, excepting the Executive Director, this shall not include the expenses of attending the Annual Convention.

5.00 BOARD OF TRUSTEES
(Referred to elsewhere in these Bylaws as Board)

5.01 COMPOSITION/VOTING POWER: The Board of Trustees shall consist of: 1) The Trustees with power to vote and their duly elected Alternates, each of the latter without power to vote except when the Trustee is not in attendance; and 2) ex-officio, the President, President-Elect, Treasurer, Immediate Past President with power to vote, Assistant Treasurer without power to vote except in case the Treasurer is not in attendance, and the Speaker, Vice Speaker, *the trustee (or the alternate) from and elected by the RMS, and Executive Director without power to vote.

*Pending final approval of verbiage by 1985 House of Delegates.

5.02 AUTHORITY: The Board shall be the executive body of the Association with full power to transact any business that emergencies or the welfare of the Association may require, and perform and exercise all of the rights and duties as specified in this section.

5.0201 The Board will declare major office holders who are delinquent in paying their dues as suspended from the office after February 1, at which time such officers shall sacrifice all rights and privileges of the office until said dues are received in full by ISMA.

5.03 ELECTION: Trustee and Alternate. The Trustees shall be elected by the respective district societies. If any district fails to meet and elect its Trustee(s) or Alternate Trustee(s) by the time of the expiration of the incumbent's term of office, the Executive Director of the Association shall cause a special meeting to be called by said district society for the purpose of such election.

5.04 MEETINGS AND TERM:

5.0401 Regular Meetings: The Board shall meet as follows: 1) The Board shall meet at least once each quarter of the calendar year, the time, date and location to be fixed by the Board. 2) On the day preceding the first day of the scientific meetings of the Annual Convention of the Association. 3) On the last day of the Annual Convention of the Association after the adjournment of the House of Delegates. 4) At such other times as necessity may require, subject to the call of the Chairman. It shall hold no meeting that will conflict with any meeting of the House of Delegates. Notice of each regular meeting shall be given at least ten days before such meeting.

5.0402 Special Meetings: Special meetings may be called at any time by the Chairman or at the request of seven members of the Board. Notice shall be given at least five days before each special meeting. The notice shall specify the general purpose of and business to be transacted at the meeting.

5.0403 Quorum: Twelve members of the Board shall constitute a quorum.

5.0404 Attendance at Meetings: If any elected Trustee fails, without reason acceptable to the Board, in any calendar year to attend a majority of the meetings of the Board, said person shall thereby cease to be a Trustee, and the Executive Director shall take action in accordance with 5.05.

5.0405 Meeting Notices: Notice is given if delivered in person, by telephone, mail or telegram. If mailed, such notice shall be deemed to be delivered when deposited in the United States mail, addressed to a Trustee (and other persons entitled to notice) at the Trustee's address then appearing on the records of the Association, with postage prepaid, and if given by telegraph, shall be deemed delivered when the telegram is delivered to the telegraph company.

Notice of any meeting and the object of business to be transacted at a meeting of the Board need not be given if waived in writing, or by telegraph, mail, or telephone before, during, or after such meeting. Attendance at any meeting shall constitute a waiver of notice of such meeting except where attendance is for the express purpose of objecting to the transacting of any business because the meeting is lawfully called or convened.

5.0406 Terms of Trustees: Terms of Trustees shall begin with the first meeting of the Board following the final session of the House of Delegates at the Annual Convention.

The term of the elected Trustees shall be for three years and approximately one third of the number shall be elected annually. No Trustee shall be eligible to serve longer than two terms consecutively.

The time given to serving an unexpired term shall not be considered in determining the period within which a Trustee may serve consecutively.

5.0407 Alternate Trustees: Each Trustee district shall elect an Alternate Trustee whose term of office shall be for three years. The Alternate Trustee shall be elected in a year during which the Trustee is not elected. No Alternate Trustee shall be eligible to serve longer than two terms consecutively. The time given to serving an unexpired term shall not be considered in determining the period within which an Alternate Trustee may serve consecutively.

5.05 VACANCIES: In the event of a vacancy occurring from any cause, except expiration of the term of office, in the office of a District Trustee, the duly elected Alternate Trustee from the same district shall succeed to the office of the Trustee in that District for the unexpired term of said Trustee. In the event the Alternate Trustee succeeds the Trustee for any cause, with the exception of expiration of term of office, the President of the District Medical Society shall assume the office of Alternate Trustee until such time as a new Trustee is elected. In the event vacancies occur in any Trustee District in the offices of both

Trustee and Alternate Trustee, the vacancies shall be filled by an election by the members of the Association within the Trustee District in which the vacancies occur. A call for such elections shall be issued by the Executive Director of the Indiana State Medical Association following a conference(s) with the officers of the District organization. The call shall state the time and place of holding the election and shall be sent registered mail to the County Secretary, as filed in the Indiana State Medical Association Executive Director's office, of each component society within the District. Such call shall be mailed within ten days after the Executive Director of ISMA has learned of the vacancies. The election may be held at a regular meeting at which business other than the election may be transacted. Such election shall be within fifteen days after the Executive Director of the Indiana State Medical Association shall have mailed such call.

5.06 **ORGANIZATION AND DUTIES:** Immediately following the conclusion of the Annual Convention, the Board shall organize by electing a Chairman, who shall serve for one year; and a Clerk who, in the absence of the Executive Director of the Association, shall keep a record of its proceedings and who in the absence of the Chairman will act as Chairman Pro-Tem. It shall, through its Chairman, make an annual report to the House of Delegates. The Chairman of the Board shall be elected by secret ballot. The number of terms of the Chairman shall be limited to not more than three in succession. The chairman of the Board of Trustees shall be an ex-officio member, without vote, of all ISMA commissions and committees.

5.0601 **Election of At-Large Members to Executive Committee:** The Board shall, at its meeting following the close of the House of Delegates, elect two members of the Board as at large members who, with the President, the President-Elect, the Immediate Past President, the Chairman of the Board, the Treasurer, the Assistant Treasurer, with the power to vote in the absence of the Treasurer, and ex-officio the Speaker and Vice Speaker without power to vote shall constitute and be known as the Executive Committee. Members of the Committee shall serve until the next organizational meeting of the Board and until their successors are elected and qualified.

The authority and functions assigned by the Board to the Executive Committee shall be reviewed annually at the first regular meeting of the Board of Trustees.

5.0602 **Conduction of Business:** The Board shall perform all acts and transact all business for or on behalf of the Association and manage the property and conduct the affairs, work and activities of the Association, except as may be otherwise provided in the Constitution or the Bylaws. All resolutions and recommendations of the House calling for the expenditure of funds passed by the House of Delegates shall be referred to the Executive Committee, which shall determine whether the expenditures are advisable and so inform the Board of Trustees. If the Board of Trustees decides that the expenditure(s) is inadvisable, the Board shall report, at its earliest convenience, to the House of Delegates the reasons for its action.

In no instance may the Executive Committee or the Board of Trustees fail to implement a mandate of the House of Delegates for reasons other than fiscal impossibility, budgetary restrictions or legal ramifications.

5.0603 **INDIANA MEDICINE and Other Publications:** The Board shall provide for the publication of and determine the editorial policies, in accordance with the policy enunciated by the House of Delegates, of 1) INDIANA MEDICINE, 2) publications as it may deem expedient, 3) a publication for public information and dissemination and 4) all proceedings, transactions and memoirs. The Board shall provide for and superintend all publications of the Association, and shall appoint an editor and an editorial board, as it deems necessary, and fix the amount of their salaries. The proceedings of the Board for the year shall be reported to the House of Delegates at the Annual Convention and be published in the number of INDIANA MEDICINE which immediately precedes the Annual Convention. The Board shall appoint an editor or editors for all the Association's publications.

5.0604 **Employ Executive:** The Board shall employ the Executive Director, and fill any vacancy therein, who shall be the person to manage and direct the activities of the Association under the authority granted by the Board.

5.0605 **Financial Reports:** The Board shall have the accounts of the Association audited at least annually.

5.0606 **County Visitation, Expenses and Reports:** Each Trustee shall be organizer, peacemaker, and censor for the represented district. The Trustee shall visit the counties in the represented district at least once a year for the purpose of organizing component societies where none exist; for inquiring into the condition of the profession, and for improving and increasing the zeal of the county societies and their members. The Trustee shall make an annual report of official work and of the condition of the profession of each county in the represented district, the same to be published in the number of INDIANA MEDICINE which is issued immediately preceding the Annual Convention. The House of Delegates may take such action, if any, as it deems appropriate upon such reports. The necessary expenses incurred by such Trustee in the line of the duties herein imposed may be allowed by the Board on a properly itemized statement, but this shall not be construed to include the Trustee's expense in attending the Annual Convention of the Association.

5.0607 **Organizing County Societies:** The Board shall make careful inquiry into the condition of the profession of each county in the state and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist, and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly relations among physicians of the same locality and

shall continue these efforts until every physician in every county of the state who can be made reputable has been brought under medical society influence. In sparsely settled sections it shall have authority to organize the physicians of two or more counties into societies to be designated by hyphenating the names of two or more counties so as to distinguish them from district and other classes of societies; and these societies, when organized and chartered, shall be entitled to all the privileges and representation provided herein for county societies, until such counties may be organized separately.

5.0608 **Scientific Work:** The Board shall, through its officers and otherwise, give diligent attention to and foster the scientific work and spirit of the Association, and shall study and strive constantly to make each Annual Convention a stepping stone to future ones of higher interest. The Board shall encourage postgraduate and research work, as well as home study, and shall endeavor to have the results utilized and intelligently discussed in the county societies.

5.0609 **Interest of the Profession:** The Board shall, in connection with the House of Delegates, consider and advise as to the interests of the profession and of the public in those important matters wherein it is dependent upon the profession, and shall use its influence to secure and enforce all proper medical and public health legislation and to diffuse popular information in relation thereto.

5.0610 **Charters:** The Board shall, upon application, provide and issue charters to county societies organized to conform to the spirit of this Constitution and Bylaws. The Board shall also provide and issue charters to component societies. Charters are defined in 11.01 and 12.01.

5.0611 **Board of Censors:** The Board shall be the Board of Censors of the Association. It shall consider all questions involving the rights and standings of members whether in relation to other members, to the component societies, or to this Association. All questions of an ethical nature brought before the House of Delegates or the General or Section meetings shall be referred to the Board without discussion.

It shall hear and decide all questions of discipline affecting the conduct of members of component societies on which an appeal is taken from the decision of an individual Trustee, and its decision in all such matters shall be final.

5.0612 **Duties of Alternate Trustee:** The duties of the Alternate Trustee shall be: 1) To represent the Trustee District when the regularly elected Trustee is not in attendance. 2) To vote only when the Trustee is not in attendance either in the House of Delegates or in the Board meetings.

6.00 THE EXECUTIVE COMMITTEE

6.01 COMPOSITION: The Executive Committee, consisting of seven (7) voting members, constituted as provided in 5.0601 of these Bylaws, shall hold its first meeting immediately following the meeting of the Board held at the close of the last session of the House of Delegates at the Annual Convention, and shall organize by electing its Chairman, from its voting members. If the Executive Committee is unable to select a chairman within thirty (30) days after the final session of the House of Delegates, then a meeting of the Board of Trustees shall be called and a Chairman of the Executive Committee shall be selected by the Board of Trustees. Its Secretary shall be the Executive Director of the Association.

6.02 DUTIES: It shall meet with the Executive Director on the call of the Chairman, or of any three (3) members to plan and execute such work as may be necessary for the welfare of the Association and the conduct of the Executive Director's office and such other duties as the Board may specify during the intervals between the meetings of the Board, and shall report its actions to the Board.

6.0201 Quorum: Four (4) voting members of the Executive Committee shall constitute a quorum.

6.0202 The amount of the Executive Director's salary shall be fixed by the Executive Committee on approval of the Board, at least annually.

6.03 BUDGET RESPONSIBILITY: It shall prepare a budget for the ensuing fiscal year; and all expenditures of the Association, except those otherwise provided for under the Constitution and Bylaws, shall be governed by the budget. No expense not provided for in the budget or otherwise under the Constitution and Bylaws shall be incurred by any officer, commission or committee. A committee, commission or officer may submit a request for funds to meet unusual expenses not included in the annual budget, and the Executive Committee shall have the power, by a two-thirds vote, to amend the budget to provide such fund.

All resolutions and recommendations of the House of Delegates calling for the expenditure of funds passed by the House of Delegates shall be referred to the Executive Committee.

6.04 INVESTMENT SURPLUS FUNDS: The investment of all surplus funds of this Association shall be under the direct control and management of the Executive Committee subject to instructions in regard thereto which may be given by the Board at its option. The Executive Committee shall have the right and is encouraged to obtain advice and counsel of recognized financial experts in regard to the discharge of the duties covered by this section of the Bylaws.

6.05 STUDENT LOAN: The Executive Committee, and with the approval of the Board, shall have the authority to make loans to medical students in accordance with the terms and conditions under which funds are made available for that purpose. Rules and regulations adopted shall be

subject to the approval of the Board. The Executive Director shall have the duty and responsibility of keeping minutes of all transactions and shall file a copy of such minutes, as well as a copy of all papers pertaining to any applications or loans, in the Headquarters Office of the Association.

6.06 VACANCY: A vacancy on the Executive Committee shall be filled by an election by the Trustees at the next regular meeting of the Board following the occurrence of such vacancy.

7.00 ORGANIZATION OF ACTIVITIES AND RESPONSIBILITIES

7.01 CREATION OF COMMITTEES AND COMMISSIONS: The organization of the Association, the performance of which is not provided elsewhere in the Constitution and Bylaws, and is not carried on in the meetings of the Board or of the House of Delegates, or by special committees created by the Executive Committee, the Board or the House of Delegates, may be performed by the following committees and commissions:

7.0101 The Committees are as follows:

7.010101 The Future Planning Committee
7.010102 The Grievance Committee
7.010103 The Indiana Medical Education Fund Committee
7.010104 The Medico-Legal Committee
7.010105 The Negotiations Committee
7.010106 The Reduce Drunk Driving Committee

7.0102 The Commissions are as follows:

7.010201 COMMISSION ON CONSTITUTION AND BYLAWS

7.010202 COMMISSION ON CONVENTION ARRANGEMENTS
This commission encompasses the field of:
Specialty Medicine

7.010203 COMMISSION ON LEGISLATION
This Commission encompasses the fields of:
State Legislation
Federal Legislation
State Regulations
Federal Regulations

7.010204 COMMISSION ON MEDICAL EDUCATION
This Commission encompasses the fields of:
Accreditation
Education Program

7.010205 COMMISSION ON MEDICAL SERVICES
This Commission encompasses the fields of:
Aging
Emergency Medical Services

Governmental Medical Service Programs
Medical Economics and Insurance
Public Health
Voluntary Health Agencies

7.010206 COMMISSION ON PHYSICIAN IMPAIRMENT
This Commission encompasses the fields of:
Alcoholism
Drug Abuse
Neuropsychiatric Illness
Physical Infirmity

7.010207 COMMISSION ON PUBLIC RELATIONS
This Commission encompasses the fields of:
Interprofessional Relations
Public Information
Special Activities

7.010208 COMMISSION ON SPORTS MEDICINE
This Commission encompasses the field of:
Sports Medicine

7.02 COMMITTEE STRUCTURE: Except as otherwise stated in the Bylaws, a committee shall consist of not less than 5(five) members appointed from the general membership of the Association and shall be appointed annually by the President. The President shall also appoint the Chairman of each committee. The Committee Chairman shall appoint a Vice Chairman.

7.03 COMMISSION STRUCTURE: The President may appoint one commission member of each 600 regular members of a trustee medical district or a major fraction thereof, but in any event, each district shall have one member on each commission.

The original appointees in each commission shall be divided into three groups by lot. The first group shall serve three years; the second, two years; and the third, one year. Thereafter, each incoming President shall appoint members of each commission to fill the vacancies resulting from the expiration of the terms of members, and such appointments shall be for three years. The President shall also appoint members to fill the unexpired term where any vacancy occurs through death, resignation or otherwise. The President may appoint a maximum of four At-Large members, one of whom may be a resident physician, for a term of one year, with the right to vote, to each com mission. The President shall appoint the Chairman of each commission. The Commission Chairman shall appoint a Vice Chairman.

7.04 EX-OFFICIO MEMBERS: The President, President-Elect, Executive Director, Speaker, Vice-Speaker of the House and the Chairman of the Board of Trustees shall be ex-officio members of all committees and commissions without voting rights where their inclusion on the committee or commission is not otherwise provided for in these Bylaws.

7.0401 **Past Presidents:** The three (3) most recent past presidents are ex-officio non-voting members of the Commission on Legislation.

7.05 **REMOVAL OF MEMBERS:** The President shall have the power, with the approval of the Board, to remove any member of any committee or commission where such member, for any reason, does not or cannot work at attempting to perform the duties pertaining to membership on such committee or commission.

7.06 **QUORUM:** Unless otherwise specified one-third (1/3) of the voting membership of a committee or commission shall constitute a quorum.

7.07 **TERMS:** Unless otherwise provided in the Bylaws, no member of a commission shall serve on the same commission more than two consecutive terms, but this shall not prevent the member from serving more than two terms if the term of another member intervenes. The time given to the serving of an unexpired term shall not be considered in determining the period within which a member may serve consecutively.

7.08 **INITIAL MEETING:** Within sixty days after the meeting of the Annual Convention, the President may call all commissions and committees into a joint meeting in order to give a statement of the duties and responsibilities of all committees and commissions, call special attention to any immediate problems confronting the Association, and assign such problems or parts thereof to appropriate committees and commissions. In these meetings, the commissions may provide for such subcommissions within the separate commissions as they may deem advisable. Each committee or commission shall have the right to call upon other committees, commissions or members of the profession for counsel and advice with respect to its work.

7.09 **COORDINATION OF ACTIVITIES:** Each committee and commission shall have the privilege and is encouraged to have joint meetings with any like committee or commission of the Auxiliary where such like committee or commission exists, for the purpose of coordinating activities to make them more effective in the medical service of the public and the intent of the Association.

7.10 **DUTIES AND RESPONSIBILITIES:** Each committee and commission shall have the duty and responsibility of keeping constantly and currently informed on the matters within the area of its special interest and activity of studying the conditions within that area with the purpose of finding possibilities for improvement; of finding the best solutions it can to the specific problems referred to it; of contributing in its area to the achievements of the Association as a whole in the protection and improvement of the health of the whole human family and finally of making all its efforts useful by passing on to the Association in the most effective manner possible the results of its studies and activities in its own area of special interest.

7.1001 **The Future Planning Committee:** The function of this committee shall be to study and anticipate future trends and to stimulate the various commissions in coordinated directions so there is a concord to the entire operation of Indiana State Medical Association. It is not contemplated that it be an operational committee.

7.1002 The Grievance Committee: The duties of this committee shall be to receive complaints, appeals or suggestions from physicians or lay persons concerning professional conduct. It shall attempt to find the facts regarding any matter brought to its attention, through procedures proper and appropriate to that end, and shall attempt to adjust differences between patients and physicians. It may, if it believes the facts justify such, cite a member of the Indiana State Medical Association to the Board of the Indiana State Medical Association. It shall, subject to the approval of the Board, draw up a set of rules and regulations governing its procedure and official action.

7.1003 The Indiana Medical Education Fund Committee: The purpose of this committee shall be to promote, develop and improve medical education in the Indiana University School of Medicine for the general benefit of the entire public by obtaining and using funds from private sources to accomplish that result. The funds collected will be deposited in a trust and at periodic intervals the committee shall make a distribution from the trust to be used by the Indiana University School of Medicine. The Indiana Medical Education Fund Committee shall consist of eight persons, five of whom shall be from the Indiana State Medical Association, appointed by the President thereof, all of whom shall be voting members. There shall be three additional members of the committee who shall be ex-officio and non-voting and they shall be the Dean of the Indiana University School of Medicine, or the Dean's designee, the President of the Indiana State Medical Association, and the Executive Director of the Association who shall also act as Secretary of the Committee. The actions of this committee shall be certified to the Board of Trustees. Each year a report of the Committee's activities, including a financial accounting report of the fund itself as administered by the trustee, shall be made part of the Board Chairman's annual report to the House of Delegates. The five members shall serve staggered terms to insure continuity. Two members shall be appointed to serve three year terms, two shall serve two year terms, and one shall serve a one year term.

7.1004 The Medico-Legal Review Committee: The Medico-Legal Review Committee shall consist of three members selected from the Indiana State Medical Association whose duty it shall be to meet in joint session and work with a similar committee of three members of the Indiana State Bar Association to be appointed by the Indiana State Bar Association. These three members of the Indiana State Medical Association shall function as the medical representatives provided for in the Joint Inter-Professional Code of the Indiana State Medical Association and the Indiana State Bar Association to carry out the purposes of that code. Its duties shall be as stated in that Code in the form in effect from time to time as approved by the Association, and in all other medico-legal matters.

7.1005 Negotiations Committee: The Negotiations Committee shall consist of five physician members appointed for terms of four years each. The initial nomination shall be staggered to insure continuity. Two members shall be appointed to four year terms. One member shall be appointed to a three year term and one member shall be appointed to

a two year term and one member shall be appointed to a one year term. The purpose of the Negotiations Committee is to become involved in proposals which affect the practice of medicine that include, but not limited to, negotiating with third parties and various government agencies at specific direction from the Board of Trustees.

7.1006 **Reduce Drunk Driving Committee:** The purpose of the Reduce Drunk Driving Committee is to reduce deaths and injuries to Indiana citizens due to drunk driving to the lowest possible level. The unprecendented nature of this important commitment to the public requires that the Committee's activities be broad in scope.

7.1007 **The Commission on Constitution and Bylaws:** The Commission on Constitution and Bylaws shall keep in contact with the developments and changes in procedures in carrying on the work of this Association; shall suggest revisions necessary to keep the Constitution and Bylaws always in accord with the practices and procedures best adapted to the functioning of the Association; and shall keep the practices and procedures of the Association consistent with the provisions from time to time contained in the Constitution and Bylaws - to the end that all members of the profession, by reference to the Constitution and Bylaws, may be able to obtain accurate information regarding procedure and practice within the Association, and that hampering of such procedure and practice by obsolete provisions in the Constitution and Bylaws be avoided. Amendments which are passed by the majority of the House become effective immediately and shall be submitted to the Commission on Consitution and Bylaws for implementation.

7.1008 **The Commission on Convention Arrangements:** The Commission on Convention Arrangements, with the advice and assistance of the Executive Director, shall provide suitable accommodations for meetings of the Association, including the House of Delegates, Board, and of their respective committees, the scientific and technical exhibits, and in conjunction with the Executive Director, shall have general charge of all the arrangements. Its Chairman shall report an outline of the arrangements to the Executive Director of the Association for publication in INDIANA MEDICINE and in the official program, and shall make additional announcements during the session as occasion may require. The arrangements and the character of any and all technical exhibits must meet with the approval of the Board of Trustees of the Association. It shall, with the approval of the Board of Trustees, prepare a program for scientific work for the Annual Convention in which shall be included the respective programs for section meetings which shall be prepared through cooperation with the officers of the various sections, and it shall, with the approval of the Board of Trustees, arrange for scientific exhibits as a part of the Annual Convention.

The general, scientific and sectional programs, and the financial arrangements to provide for them must be approved by the Executive Committee before being officially announced.

7.1009 The Commission on Legislation: The Commission on Legislation shall study all legislation, regulations and regulatory proposals, both state and national, and all local legislative and regulatory trends and movements, as to their effect upon the practice of medicine and the protection of the public health; shall keep the profession informed at all times concerning the matters within its area of responsibility; shall conduct investigations of legislative and regulatory proposals; and shall maintain liaison with members of the State Legislature and the United States Congress, state regulatory agencies whose scope and charge may affect the practice of medicine and the public health and welfare and with the legislative and regulatory activities of the American Medical Association. It shall strive to implement and make effective the legislative and regulatory proposals adopted by the Association but shall not abrogate its responsibility within the scope of this charge for want of a specific mandate from the House.

7.1010 The Commission on Medical Education: The Commission on Medical Education shall maintain liaison with, and be of assistance to medical schools and the medical licensing board. It shall keep in contact with, and endeavor to assist in improving and maintaining high quality undergraduate, graduate and continuing medical education and public school health education within the state. The Commission on Medical Education with the assistance of the Subcommission on Accreditation shall serve as the Indiana State Medical Association state's accrediting body to accredit institutions and organizations for the presentation of intrastate continuing medical education programs.

7.1011 The Commission on Medical Services: The Commission on Medical Services shall concern itself and assume special responsibility in obtaining information and giving counsel and advice to the Association with respect to all matters in which medical service comes into contact with any existing or proposed functions of government, including civil defense, rehabilitation of persons handicapped by abnormality or disease, medical service in welfare departments, maternal and child health programs sponsored through governmental agencies, medical care of military personnel, plans and programs for medical care of veterans, medical care for dependents of those in uniformed services of the government, plans and programs of the government for medical care now existing or which may hereafter be adopted by any special group, government programs for elimination of venereal disease and other communicable diseases, and all programs and plans for medical care to be provided through municipal, state or federal governments.

7.1012 The Commission on Physician Impairment: The Commission on Physician Impairment shall develop a program to recognize, treat and rehabilitate physicians who are impaired by neuropsychiatric illness, physical infirmities or alcohol and other substance dependence. The Commission will encourage informal and formal referral of all impaired physicians through county medical society screening committees.

7.1013 The Commission on Public Relations: The Commission on Public Relations shall collect and organize for dissemination to the public all matters of public interest within the field of medicine,

including the activities of other commissions in which the public interest would be involved, and including also the achievements in the advancement of medicine which would be of interest to the public; shall disseminate all such information through the use of whatever media the commission may find adaptable to that purpose so that such information may be brought to the public in the most effective and convincing manner; and shall develop and maintain the relations of the medical profession with the public in such a way as to give the lay public a better knowledge and understanding of the aims, objectives and value of the profession.

7.1014 **The Commission on Sports Medicine:** The Commission on Sports Medicine shall provide liaison between the ISMA and various athletic organizations. The Commission will research issues and make recommendations in a variety of areas relating to sports medicine in our state, in an attempt to improve the medical care of Indiana athletes and related personnel.

7.11 **TRAVEL REIMBURSEMENT:** ISMA will reimburse commission and committee members at the rate currently allowed by the IRS for mileage driven to attend ISMA commission and committee meetings. This does not include any expense of attending same during the annual convention.

8.00 RECIPROCITY OF MEMBERSHIP WITH OTHER STATE SOCIETIES

In order to broaden professional fellowship, this Association is ready to arrange with other State Medical Associations for an interchange of certificates of membership so that members moving from one state to another may avoid the formalilty of re-election.

9.00 REFERENDUM

9.01 **GENERAL AND SPECIAL MEETINGS:** Providing a quorum is present, (150 members) as per 3.0403 of these Bylaws, a general or special meeting of the Association may, by a two-thirds vote of the members present, order a general referendum on any question pending before the House of Delegates, and when so ordered the House of Delegates shall submit such question to the members of the Association, who may by mail or in person, and if the members voting shall comprise a majority of all members of the Association, a majority vote shall determine the questions and be binding on the House of Delegates.

9.02 **GENERAL REFERENDUM:** The House of Delegates may, by a two-thirds vote of its own members, submit any question before it to a general referendum, as provided in the preceding paragraph, and the result shall be binding on the House of Delegates.

10.00 THE SEAL

The Association shall have a common Seal, with power to break, change or renew that same at pleasure.

11.00 COUNTY SOCIETIES

11.01 CHARTERS: All county societies now in affiliation with this Association or those which may hereafter be organized in this state, which have adopted principles of organization not in conflict with this Constitution and Bylaws, or those of the American Medical Association, shall on application receive a charter from and become a component part of this Association. The acceptance or retention of this charter shall be regarded as a pledge on the part of said component society to conduct itself in harmony with the letter and spirit of this Constitution and Bylaws and other rules and resolutions of this Association. Charters shall be issued only upon approval of the Board and shall be signed by the President and Executive Director of this Association. The Board shall have the authority to revoke the charter of any component society whose actions are in conflict with the letter and spirit of this Constitution and Bylaws or those of the AMA.

11.0101 Conflicting Societies: With the exception of the component Student Medical Society, only one component medical society shall be chartered in any county. Where more than one county society exists, friendly overtures and concessions shall be made, with the aid of the Trustee for the district if necessary, and all of the members brought into one organization. In case of failure to unite, an appeal may be made to the Board, which shall decide what action shall be taken.

11.02 MEMBERSHIP QUALIFICATIONS: Each county society shall be judge of the qualifications of its own members, but, as such societies are the only portals to this Association, every reputable and legally registered physician who holds a degree of Doctor of Medicine, a degree of Bachelor of Medicine or who holds a valid, unrestricted license to practice medicine and surgery shall be eligible for membership. Provided, however, that each county society may deny membership in such society for infraction or violation of any law relating to the practice of medicine or of the Constitution and Bylaws of such society, the Constitution and Bylaws of the Indiana State Medical Association, the Constitution and Bylaws of the American Medical Association, or for a violation of the Principles of Medical Ethics of the Indiana State Medical Association; and may, after due notice and hearing, censor, suspend or expel any member for any such infraction. Before a charter is issued to any county society, full and ample notice and opportunity shall be given to every physician in the county to become a member.

11.03 RIGHT OF APPEAL: Physicians who may feel aggrieved by the action of the society of their county in refusing them membership, or in suspending or expelling them, shall have the right to appeal to the Board, and its decision shall be final.

In hearing appeals the Board may admit oral or written evidence as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a board and as individual Trustees in district and county work, efforts at conciliation and compromise shall precede all such hearings.

11.04 MEMBERSHIP TRANSFER: When members in good standing in a component society move to another county in this state, their names shall be transferred without cost to the roster of the county society into whose jurisdiction they move, provided the transfer is approved by majority

vote of the membership of said society to which the transfer is proposed. Physicians who have the major part of their practice in a county other than the county in which they reside may hold membership in the county society of their residence or in the county society of the county in which they have the major part of their practice. However, physicians shall not hold active membership in more than one county society at the same time.

11.05 DIRECTION OF PROFESSION: Each component society shall have general direction of the affairs of the profession in its county, and its influence shall be constantly exerted for bettering the scientific, moral and professional status of every physician in the county; and systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified and honorable physician in the county.

11.06 SELECTION OF DELEGATES: At the annual business meeting for election of officers, in advance of the Annual Convention of this Association, each county society shall elect Delegates and Alternates to represent it in the House of Delegates of this Association, and the Secretary of the society shall send a list of such Delegates and Alternates to the Executive Director of this Association annually on or before February 1.

11.07 SECRETARIAL DUTIES: The Secretary of each component society shall keep a roster of all its members and of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this state, and such other information as may be deemed necessary. In keeping such a roster the Secretary shall note any changes in the personnel of the profession by death, or by removal to or from the county, and in making the required annual report the Secretary shall be certain to account for every physician who has lived in the county during the year.

The Secretary of each component society shall prepare and send to the Trustee of the Secretary's district a quarterly report briefly stating the activities of the Secretary's county society including meetings, programs, changes in officers and personnel or membership. A copy of this quarterly report to the Trustee shall also be sent to the Executive Director of the Indiana State Medical Association. The Indiana State Medical Association shall supply each County Secretary a form for these reports.

11.08 FISCAL YEAR AND DUES: The fiscal year of the Association shall be from October 1 to September 30 of the succeeding year. The dues shall be collected by the calendar year and payable in advance. Unless collected by the Indiana State Medical Association, the Secretary of each component society shall forward the dues for the society to the Executive Director of this Association and shall furnish the Indiana State Medical Association headquarters with a roster of officers, members, and a listing of non-affiliated physicians of the county, on or before January 1 of each year, and shall promptly report thereafter the names of any new members elected to membership in the society, and promptly forward to the Executive Director of this Association the dues for such members.

The dues and the rights and benefits of all members shall be as provided in 1.00 et seq. of the Bylaws.

11.09 FAILURE TO PAY DUES: Any county society which fails to pay dues or make the report required by January 15 of each year shall be delinquent. Any county society which fails to pay dues or make the report by April 30 shall be held suspended, and none of its members or delegates shall be permitted to receive any of the publications of the Association or participate in any of the business or proceedings of the Association or of the House of Delegates until such requirements have been met.

11.10 SECRETARY DIRECTION: Each county society shall be held responsible for the faithfulness in the performance of duty on the part of its Secretary in making reports and remitting dues to the Association.

11.11 CONSTITUTION AND BYLAWS: Each component society shall have its own Constitution and Bylaws, which shall not be in conflict with the Constitution and Bylaws either of this Association or of the American Medical Association. An up-to-date copy thereof shall be filed with the Executive Director of the Indiana State Medical Association not later than May 1 of each calendar year, or where such copy is so on file and no change has been made, then it shall be sufficient to file a certificate to that effect with the Executive Director.

12.00 OTHER COMPONENT SOCIETIES

12.01 CHARTERS: All component societies now in affiliation with this Association and those which may hereafter be organized in this state, which have adopted principles of organization not in conflict with this Constitution and Bylaws, or those of the American Medical Association, shall receive a charter from and become a component part of this Association. The acceptance or retention of this charter shall be regarded as a pledge on the part of said component society to conduct itself in harmony with the letter and spirit of this Constitution and Bylaws and other rules and resolutions of this Association. Charters shall be issued only upon approval by the Board and shall be signed by the President and Executive Director of this Association. The Board shall have the authority to revoke the charter of any component society whose actions are in conflict with the letter and spirit of this Constitution and Bylaws or those of the AMA.

12.02 CONSTITUTION AND BYLAWS: Each component society shall have its own Constitution and Bylaws, which shall not be in conflict with the Constitution and Bylaws either of this Association or the American Medical Association. An up-to-date copy thereof shall be filed with the Executive Director of the Indiana State Medical Association not later than May 1 of each calendar year, or where such copy is so on file and no change has been made, then it shall be sufficient to file a certificate to that effect with the Executive Director.

12.03 RESIDENT MEDICAL SOCIETY OF THE INDIANA STATE MEDICAL ASSOCIATION (RMS)

12.0301 Composition: Residents enrolled in AMA accredited programs in the state of Indiana shall be eligible to join the Resident Medical Society with all rights and privileges as a regular member of ISMA. This society shall be allowed to send one delegate or alternate delegate to the House of Delegates with full voting privileges. Any member of this society shall be eligible to hold office. There shall be only one RMS.

12.0302 Organization: This society shall be organized similarly to other component medical societies. Upon call of the President, all eligible residents shall be invited to join the RMS by attending an organizational meeting as soon as expeditiously possible. Appropriate officers shall be elected by those in attendance in order to conduct the affairs of this society. This society shall then become a component medical society.

12.0303 Secretarial Duties: The Secretary of the RMS component society shall keep a roster of all its members in which shall be shown the full name, address, college and date of graduation, date of license to practice in this state, and such other information as may be deemed necessary.

12.0304 Dues: The IRMS member shall pay dues to ISMA at 10% that of the regular member, rounded off to the nearest whole dollar which shall entitle the member to full rights and privileges of ISMA membership. These dues shall be collected in accordance with ISMA Bylaws. No relief of dues shall be possible.

12.04 MEDICAL STUDENT SOCIETY

12.0401 Composition: Medical students actively enrolled in an accredited medical school in Indiana are members of this society with all rights and privileges as described in 1.0104.

12.0402 Organization: The Student Council of the Indiana University School of Medicine shall elect a student delegate and alternate delegate from nominees presented to them from each class. All resolutions introduced in the name of the student body must be presented through the Student Council functioning as the executive body of the student members - in effect, a student component society.

12.0403 Dues: Medical Student members shall be assessed no dues, but may subscribe to INDIANA MEDICINE at the current rate determined from time to time by the Board of Trustees.

12.0404 Secretarial Duties: The Secretary of the Student Medical Society shall submit to ISMA each year a roster of medical students actively enrolled in an accredited medical school in Indiana.

13.00 TRUSTEE DISTRICT MEDICAL SOCIETIES

13.01 COMPOSITION: A Trustee District Medical Society, hereinafter called the district society, shall be a society whose members consist of the members of the county medical societies in the counties which constitute the Trustee district.

13.02 NUMBER OF DISTRICTS: The state shall be divided into thirteen Trustee districts with the boundary lines and number of each district to be as follows:

First District--Posey, Vanderburgh, Warrick, Spencer, DuBois, Perry, Pike and Gibson Counties.

Second District--Knox, Daviess, Martin, Monroe, Owen, Greene and Sullivan Counties.

Third District--Crawford, Harrison, Floyd, Clark, Scott, Washington, Orange and Lawrence Counties.

Fourth District--Jackson, Jennings, Jefferson, Switzerland, Ohio, Dearborn, Ripley, Decatur, Bartholomew and Brown Counties.

Fifth District--Clay, Vigo, Vermillion, Parke and Putnam Counties.

Sixth District--Shelby, Rush, Fayette, Franklin, Union, Wayne, Henry and Hancock Counties.

Seventh District--Morgan, Johnson, Marion and Hendricks Counties.

Eighth District--Madison, Delaware, Randolph, Jay and Blackford Counties.

Ninth District--Fountain, Montgomery, Boone, Hamilton, Tipton, Clinton, Tippecanoe, Warren, Benton, White, Newton and Jasper Counties.

Tenth District--Porter and Lake Counties.

Eleventh District--Carroll, Howard, Grant, Wabash, Miami, and Cass Counties.

Twelfth District--Wells, Adams, Whitley, Allen, Noble, Huntington, DeKalb, LaGrange and Steuben Counties.

Thirteenth District--Pulaski, Fulton, Kosciusko, Marshall, Starke, LaPorte, St. Joseph and Elkhart Counties.

13.03 CONSTITUTION AND BYLAWS: Each district society shall adopt a Constitution and Bylaws, which shall not conflict with the Constitution and Bylaws of the Indiana State Medical Association, or those of the American Medical Association, and only one district society shall exist within any one Trustee district. The authorized district society in each Trustee district shall receive a charter from the Indiana State Medical Association, and the Secretary of the district society shall have custody of the charter.

13.04 OFFICERS: Each district society shall organize by electing a President, a Secretary and a Treasurer and Trustee(s) and Alternate Trustee(s) as the current Trustee(s) term and Alternate Trustee(s) term for the district expires, and such others as may be provided for in its Constitution and Bylaws. The office of Secretary and Treasurer may be held by the same physician. The Trustee(s) shall continue to have the same duties and terms as are set forth in the Constitution and Bylaws of this Association.

13.05 TRUSTEE ALLOCATION: Each district society shall have one Trustee and one Alternate Trustee for each 600 regular members or major fraction thereof but in any event each district shall have one Trustee and one Alternate Trustee. The term of each trusteeship newly created by the

numerical growth of a district shall begin at the organization meeting of the Board immediately following the adjournment of the final session of the House of Delegates at the next Annual Convention in accordance with 5.06.

13.06 **DUES:** The dues of the district society, in an amount fixed by the district society to meet the society needs, shall be collected by the Secretaries of the component county societies, or by the Indiana State Medical Association and delivered to the Treasurer of the district society. The Secretary of each district society shall report to the office of the Indiana State Medical Association the names and addresses of the members of the district society, together with a copy of the minutes of each meeting of the district society.

13.07 **MEETINGS:** Each district society shall meet at least once each year at a time and place to be fixed by the district society. On or before January 1 of each year each district society shall notify the headquarters of the Indiana State Medical Association of the time and place of the annual district meeting for that year; but if no such notification has been received in the headquarters on or before the January meeting of the Board, the Trustee shall fix the time and place of the district meeting, and notice of such meeting shall be sent to the members of the county medical societies in such district.

13.08 NOTIFICATION TO HEADQUARTERS:

13.0801 **Election of Trustee or Alternate:** Whenever a district society is to elect a Trustee and/or Alternate, the headquarters office of the Indiana State Medical Association shall so notify the individual members of such district society not later than six weeks in advance of said election date.

13.0802 **Agenda for Meeting:** The district society shall send to the headquarters office a copy of its program showing the time and place of its meeting, early enough that the headquarters office may notify all members within the district of the meeting at least thirty days prior to the date thereof.

14.00 MEDICAL DEFENSE - MEDICAL DEFENSE ADMINISTRATION, AUTHORITY AND PROCEDURES

14.01 **ADMINISTRATION:** The administration of this entire section shall be entrusted to the ISMA Board of Trustees which shall have full authority to develop rules and procedures, and make reports as it may deem appropriate. Any matter not specifically addressed in this section shall be left to the discretion of the Board of Trustees.

14.02 **POLICY AND PURPOSE:** It shall be the policy of ISMA that this section of the Bylaws shall only be used as authority to involve ISMA in medical defense and/or countersuit litigation that is of such a nature that the issues presented are of significant concern and impact on the practice of medicine as a whole. In no event shall this section be construed as authority or obligation for ISMA to involve itself in litigation that is primarily a matter of individual concern. This section shall not be

14.03 ELIGIBILITY--Request for ISMA Involvement-Procedure: Before a request for ISMA involvement will be considered by the ISMA Board of Trustees the following conditions should be met:

(a) The physician making the request should be a member in good standing of ISMA.

(b) A written request for ISMA involvement in medical defense and/or countersuit litigation should be sent to the Board of Trustees detailing the facts of the case as well as why the issues involved are of such a nature that they impact on the practice of medicine as a whole.

(c) A written statement of support from the physician's county medical society should accompany the request for ISMA involvement.

15.00 MISCELLANEOUS - DIVISION OF FEES

This Association does not countenance or tolerate fee-splitting, division of fees, or commission paying directly or indirectly, and any member found guilty shall be expelled from membership.

16.00 PARLIAMENTARY PROCEDURE

The deliberations of this Association shall be governed by parliamentary usage as prescribed in the current edition of Sturgis Standard Code of Parliamentary Procedure, when not in conflict with this Constitution and Bylaws.

17.00 AMENDMENTS

17.01 BYLAWS AMENDMENTS: These Bylaws may be amended by resolution, as in 3.020701b, which shall be treated as any other proposed amendment, at any meeting of the House of Delegates by a majority vote of all the Delegates present. Amendments to the Bylaws must be submitted to the Association 45 days in advance of the meeting. These amendments must be presented to the Commission on Constitution and Bylaws prior to the meeting and are eligible for passage after lying on the table for one day.

17.02 OTHER: Any other Bylaw amendment presented to the House of Delegates will not be eligible for consideration by the House of Delegates unless two-thirds majority of the first session of the House of Delegates votes to consider the amendment as presented.

17.03 AMENDMENT IMPLEMENTATION: Amendments which are passed by the majority of the House become effective immediately and shall be submitted to the Commission on Constitution and Bylaws for implementation.

18.00 MEDICAL ETHICS

The Principles of Medical Ethics of the American Medical Association shall govern the conduct of members in their relations to each other and to the public.

EXCERPTS FROM A SYMPOSIUM
"THE TREATMENT OF SLEEP DISORDERS"[8]

"...highly effective for both sleep induction and sleep maintenance"

Sleep Laboratory Investigator
Pennsylvania

"...onset of action is rapid...provides sleep with no rebound effect to agitate the patient the following day"

Psychiatrist
California

"...appears to have the best safety record of any of the benzodiazepines"

Psychiatrist
California

After 15 years, the experts still concur about the continuing value of Dalmane (flurazepam HCl/ Roche). It provides sleep that satisfies patients... and the wide margin of safety that satisfies you.

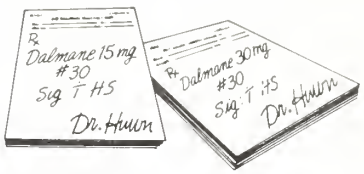
The recommended dose in elderly or debilitated patients is 15 mg. Contraindicated in pregnancy.

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flurazepam HCl/Roche Ⓥ
sleep that satisfies

15-mg/30-mg
capsules



References: 1. Kales J, *et al Clin Pharmacol Ther 12* 691 697, Jul-Aug 1971. 2. Kales A, *et al Clin Pharmacol Ther 18* 356-363, Sep 1975. 3. Kales A, *et al Clin Pharmacol Ther 19* 576-583, May 1976. 4. Kales A, *et al Clin Pharmacol Ther 32* 781-788, Dec 1982. 5. Frost JD Jr, DeLucchi MR. *J Am Geriatr Soc 27* 541-546, Dec 1979. 6. Dement WC, *et al Behav Med*, pp 25-31, Oct 1978. 7. Kales A, Kales JD. *J Clin Psychopharmacol 3* 140-150, Apr 1983. 8. Tennant FS, *et al* Symposium on the Treatment of Sleep Disorders, Teleconference, Oct 16, 1984. 9. Greenblatt DJ, Allen MD, Shader RI. *Clin Pharmacol Ther 21* 355-361, Mar 1977



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Before prescribing, please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening, in patients with recurring insomnia or poor sleeping habits, in acute or chronic medical situations requiring restful sleep. Objective sleep laboratory data have shown effectiveness for at least 28 consecutive nights of administration. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended. Repeated therapy should only be undertaken with appropriate patient evaluation.

Contraindications: Known hypersensitivity to flurazepam HCl, pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Several studies suggest an increased risk of congenital malformations associated with benzodiazepine use during the first trimester. Warn patients of the potential risks to the fetus should the possibility of becoming pregnant exist while receiving flurazepam. Instruct patients to discontinue drug prior to becoming pregnant. Consider the possibility of pregnancy prior to instituting therapy.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Withdrawal symptoms rarely reported; abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase, and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect. *Adults*: 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients*: 15 mg recommended initially until response is determined.

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OCTOBER 1985 VOL. 78 NO. 10

INDIANA MEDICINE

The Journal of the Indiana State Medical Association

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Annual Convention
November 14–17, 1985
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OCTOBER 1985

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THE FRANCIS A. COUNTWAY LIBRARY OF MEDICINE BOSTON, MA

NOV 5 1985

USPS 284-440
ISSN 0746-8288

OFFICE OF PUBLICATION:
3935 N. Meridian St.,
Indianapolis, Ind. 46208
Tel: (317) 925-7545

INDIANA MEDICINE (ISSN 0746-8288) is published monthly by the Indiana State Medical Association. Second-class postage paid at Indianapolis, Ind.
POSTMASTER: Send address changes to INDIANA MEDICINE, 3935 N. Meridian St., Indianapolis, Ind. 46208.
Yearly subscription rates: $20 domestic, $22 Canada, $23 foreign. Library rates: $18 domestic, $20 Canada, $21 foreign. Senior ISMA members and full-time medical students—$10. Single copies not available. Subscriptions renewable only in January and July.

Views expressed do not necessarily reflect the opinions of the editors. No copyright is claimed, unless specifically indicated. Copyright rests solely with authors, who are responsible for statements made in their articles. Scientific and editorial contributions are accepted for exclusive publication, subject to editorial requirements. Publication deadline: 1st day of month preceding month of issue. Instructions for authors available upon request.

All issues since 1967 are available on microfilm from University Microfilms International, 300 N. Zeeb Rd., Ann Arbor, Mich. 48106. Indexed in Index Medicus and Hospital Literature Index.

Advertising rates and data available upon request.



ABOUT THE COVER

"Medicine at the Crossroads" is the theme of this year's ISMA convention, to be conducted next month in South Bend. A highlight will be the general scientific meeting on "Physicians and Stress." For more information, see the pre-convention section in this issue.

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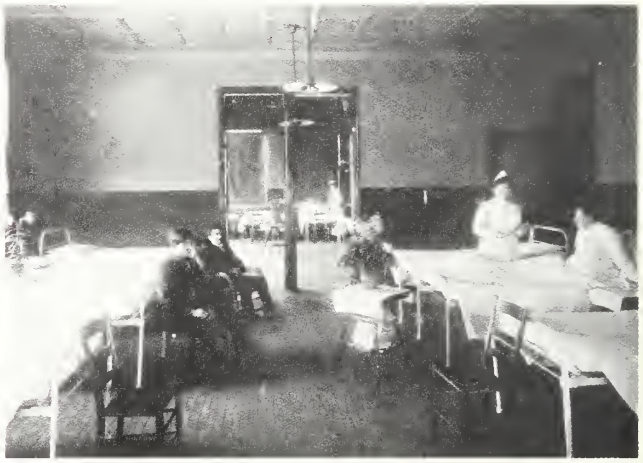
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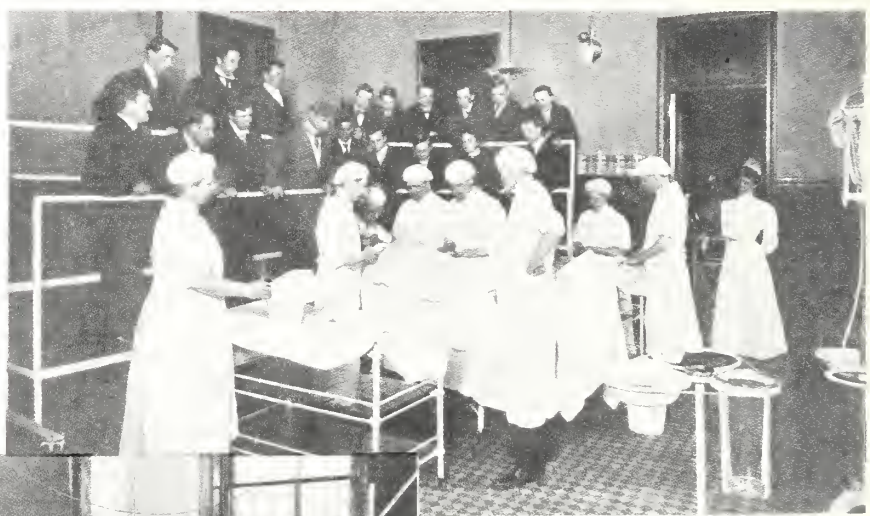


ALTHOUGH the initial designation of the building above was the State College of Physicians and Surgeons, it was soon changed to the Indiana University School of Medicine. The building stood on the west side of the street in the 200 block of N. Senate Avenue in Indianapolis.

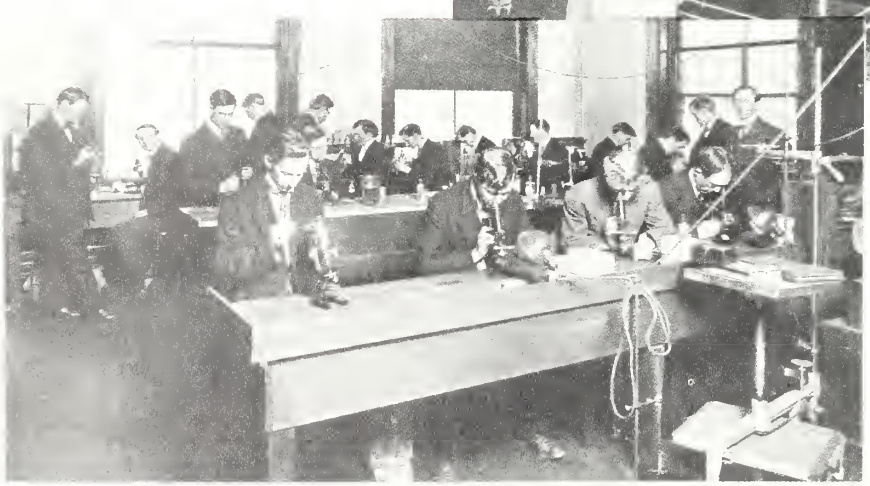


THE TOP two floors of this building constituted the 70-bed State College Hospital. Two interns were appointed annually for a term of one year, with salaries of $150 per annum, plus room and board.

Indiana University School of Medicine: The Early Years—1907



AT RIGHT is the "main operating room." A second, smaller room was used for "pus cases."



EQUIPMENT in the laboratory for clinical microscopy (left) included eight microscopes and an apparatus for studying blood, urine, sputum, stomach contents, etc. The laboratory had the latest in equipment. The x-ray laboratory, which also contained the latest in equipment, was in use daily from 2 to 3 p.m.

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SORBITRATE
(ISOSORBIDE DINITRATE)

Please consult full prescribing information before use. A summary follows:

INDICATIONS AND USAGE: SORBITRATE (isosorbide dinitrate) is indicated for the treatment and prevention of angina pectoris. All dosage forms of isosorbide dinitrate may be used prophylactically to decrease frequency and severity of anginal attacks and can be expected to decrease the need for sublingual nitroglycerin.

The sublingual and chewable forms of the drug are indicated for acute prophylaxis of angina pectoris when taken a few minutes before situations likely to provoke anginal attacks. Because of a slower onset of effect, the oral forms of isosorbide dinitrate are not indicated for acute prophylaxis.

CONTRAINDICATIONS: SORBITRATE is contraindicated in patients who have shown purported hypersensitivity or idiosyncrasy to it or other nitrates or nitrites. Epinephrine and related compounds are ineffective in reversing the severe hypotensive events associated with overdose and are contraindicated in this situation.

WARNINGS: The benefits of SORBITRATE during the early days of an acute myocardial infarction have not been established. If one elects to use organic nitrates in early infarction, hemodynamic monitoring and frequent clinical assessment should be used because of the potential deleterious effects of hypotension.

PRECAUTIONS: General: Severe hypotensive response, particularly with upright posture, may occur with even small doses of SORBITRATE. The drug should therefore be used with caution in subjects who may have blood volume depletion from diuretic therapy or in subjects who have low systolic blood pressure (eg, below 90 mmHg). Paradoxical bradycardia and increased angina pectoris may accompany nitrate induced hypotension. Nitrate therapy may aggravate the angina caused by hypertrophic cardiomyopathy.

Marked symptomatic, orthostatic hypotension has been reported when calcium channel blockers and organic nitrates were used in combination. Dose adjustment of either class of agents may be necessary.

Tolerance to this drug and cross-tolerance to other nitrates and nitrites may occur. Tolerance to the vascular and antianginal effects of isosorbide dinitrate or nitroglycerin has been demonstrated in clinical trials, experience through occupational exposure, and in isolated tissue experiments in the laboratory. The importance of tolerance to the appropriate use of isosorbide dinitrate in the management of patients with angina pectoris has not been determined. However, one clinical trial using treadmill exercise tolerance (as an end point) found an 8 hour duration of action of oral isosorbide dinitrate following the first dose (after a 2-week placebo washout) and only a 2 hour duration of effect of the same dose after 1 week of repetitive dosing at conventional dosing intervals. On the other hand, several trials have been able to differentiate isosorbide dinitrate from placebo after 4 weeks of therapy and, in open trials, an effect seems detectable for as long as several months.

Tolerance clearly occurs in industrial workers continuously exposed to nitroglycerin. Moreover, physical dependence also occurs since chest pain, acute myocardial infarction, and even sudden death have occurred during temporary withdrawal of nitroglycerin from the workers. In clinical trials in angina patients, there are reports of anginal attacks being more easily provoked and of rebound in the hemodynamic effects soon after nitrate withdrawal. The relative importance of these observations to the routine, clinical use of isosorbide dinitrate is not known. However, it seems prudent to gradually withdraw patients from isosorbide dinitrate when the therapy is being terminated, rather than stopping the drug abruptly.

Information for Patients: Headache may occur during initial therapy with SORBITRATE. Headache is usually relieved by the use of standard headache remedies or by lowering the dose and tends to disappear after the first week or two of use.

Drug Interactions: Alcohol may enhance any marked sensitivity to the hypotensive effect of nitrates.

Isosorbide dinitrate acts directly on vascular smooth muscle; therefore, any other agent that depends on vascular smooth muscle as the final common path can be expected to have decreased or increased effect depending on the agent.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No long-term studies in animals have been performed to evaluate the carcinogenic potential of this drug. A modified two litter reproduction study in rats fed isosorbide dinitrate at 25 or 100 mg/kg/day did not reveal any effects on fertility or gestation or any remarkable gross pathology in any parent or offspring fed isosorbide dinitrate as compared with rats fed a basal controlled diet.

Pregnancy Category C: Isosorbide dinitrate has been shown to cause a dose-related increase in embryotoxicity (increase in mummified pups) in rabbits at oral doses 35 and 150 times the maximum recommended human daily dose. There are no adequate and well-controlled studies in pregnant women. SORBITRATE should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when SORBITRATE is administered to a nursing woman.

Pediatric Use: The safety and effectiveness of SORBITRATE in children has not been established.

ADVERSE REACTIONS: Adverse reactions, particularly headache and hypotension, are dose-related. In clinical trials at various doses, the following have been observed.

Headache is the most common (reported incidence varies widely, apparently being dose-related, with an average occurrence of about 25%) adverse reaction and may be severe and persistent. Cutaneous vasodilation with flushing may occur. Transient episodes of dizziness and weakness, as well as other signs of cerebral ischemia associated with postural hypotension, may occasionally develop (the incidence of reported symptomatic hypotension ranges from 2% to 36%). An occasional individual will exhibit marked sensitivity to the hypotensive effects of nitrates and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration, and collapse) may occur even with the usual therapeutic dose. Drug rash and/or exfoliative dermatitis may occasionally occur. Nausea and vomiting appear to be uncommon. Case reports of clinically significant methemoglobinemia are rare at conventional doses of organic nitrates. The formation of methemoglobin is dose related and, in the case of genetic abnormalities of hemoglobin that favor methemoglobin formation, even conventional doses of organic nitrate could produce harmful concentrations of methemoglobin.

DOSAGE AND ADMINISTRATION: For the treatment of angina pectoris, the usual starting dose for sublingual SORBITRATE is 2.5 to 5 mg, for chewable tablets, 5 mg, for oral (swallowed) tablets, 5 to 20 mg, and for controlled release forms, 40 mg.

SORBITRATE should be titrated upward until angina is relieved or side effects limit the dose. In ambulatory patients, the magnitude of the incremental dose increase should be guided by measurements of standing blood pressure.

The initial dosage of sublingual or chewable SORBITRATE for prophylactic therapy in angina pectoris patients is generally 5 or 10 mg every 2 to 3 hours. Adequate controlled clinical studies demonstrating the effectiveness of chronic maintenance therapy with these dosage forms have not been reported.

SORBITRATE in oral doses of 10 to 40 mg given every 6 hours or in oral controlled release doses of 40 to 80 mg given every 8 to 12 hours is generally recommended. The extent to which development of tolerance should modify the dosage program has not been defined. *The oral controlled-release forms of isosorbide dinitrate should not be chewed.*

DOSAGE FORMS AVAILABLE: Sublingual Tablets (2.5, 5, 10 mg), Chewable Tablets (5, 10 mg), Oral Tablets (5, 10, 20, 30, 40 mg), Sustained Action Tablets (40 mg).

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Kellogg Foundation Announces Fellowships

The W. K. Kellogg Foundation has announced the availability of the Kellogg National Fellowships. The deadline for applications is Dec. 31, 1985.

The program, initiated in 1980, is designed "to prepare leaders who can function effectively and knowledgeably in dealing with complex problems where narrow expertise is not sufficient." It seeks to involve young men and women who are interested in developing "interdisciplinary and cross-cultural perspectives on contemporary human and social problems."

To be eligible, individuals must be employed full- or part-time by a 501(c)(3) organization and must have the endorsement of the chief executive officer and immediate supervisor of their employing institution.

The fellowship awards will be made in behalf of as many as 50 individuals of exceptional merit and competence who have exhibited leadership potential in their community, organization or profession. During the fellowship experience, fellows must receive 25% release time to carry out a non-degree, self-directed learning plan to expand their personal horizons beyond the confines of their chosen profession.

The award includes $30,000 for the development and completion of the learning plan. In addition, 12½% of the fellow's official salary is payable through this fellowship; salary reimbursement is limited to a maximum of $20,000 for the three-year period. An additional $4,000 is also included in this grant to be used only for travel and expenses incurred while participating in the seven required seminars. One of these seminars is two weeks long and is conducted in Latin America; all others are one week in length. Attendance is required at all seminars.

Due to the nature of the program, fellows may not be accompanied by spouses or dependents. No exceptions will be made.

For applications and additional information contact Kellogg National Fellowship Program, W. K. Kellogg Foundation, 400 North Avenue, Battle Creek, Mich. 49017—(616) 968-1611.

WHAT'S NEW?

News of what is new in the medical supply industry is composed of abstracts from news releases by book publishers and manufacturers of pharmaceuticals, clinical laboratory supplies, instruments and surgical appliances. Each item is published as news and does not necessarily constitute an endorsement of a product or recommendation for its use by INDIANA MEDICINE or by the Indiana State Medical Association.

Mead Johnson Oncology Products announces the introduction of a new 2 gram size of Lyophilized Cytoxan® (cyclophosphamide). The 2 gram vials are available now.

AT&T recently announced a specially designed computer software package, AT&T Doctor's Solution, to automate the business management of medical practices. It runs on AT&T's 3B2 computers and can be used for medical as well as business records. A doctor can file patients' medical histories, for example, and in a few seconds recall vital information such as a patient's allergies, medications and family history.

Beseler is introducing an easy-to-use camera system for producing 35mm color slides, instant prints and 4x5″ or 8x10″ overhead transparencies in color and black-and-white from graphics and text generated by personal computers and computer-graphics workstations. The Beseler Computer Image Film Recorder's advanced digital technology produces the most accurate color rendition and maximum tonal range from both analog and TTL computer systems.

American Dade, a division of American Hospital Supply Corporation, has developed a highly accurate, cost-effective pregnancy test that produces results in just minutes. The Stratus® HCG Assay Kit comes complete with all reagents and calibrators. It is especially valuable in Emergency Rooms in cases involving women of child-bearing age for whom the test for presence or absence of pregnancy is sometimes necessary prior to emergency treatment. Other pregnancy tests may require too much time or have too many false-positive or false-negative results.

Warner Lambert is introducing a unique new vanilla-flavored calcium supplement that is soft and chewy. Each two-square dose provides 1,200 mg of elemental calcium to fulfill the RDA. The new product is called Suplical Soft Chewy Calcium Supplement.

DataChem has introduced a new clinical chemistry analyzer which performs stat chemistry, coagulation and electrolyte measurements with the help of Bar Code technology. DataChem offers an interface for the clinical analyzer with Celltrak Hematology analyzer which allows automatic entry of results into patient records.

Beecham Laboratories announces FDA approval for marketing Timentin™ (ticarcillin disodium/clavulanate potassium), a new intravenous antibiotic. The clavulanate antibiotics fight bacterial resistance by destroying beta-lactamase enzymes. These are the compounds that make many penicillin and cephalosporin antibiotics powerless. Ticarcillin, a semi-synthetic penicillin, is especially effective when given with clavulanate potassium for treatment of pneumonias which develop in hospitals.

The Male Potency Clinic announces an FDA-registered device, the PS-10, an external prosthesis for relief of impotence. Designed as an alternative to penile implants, it has been tested extensively and found to be effective.

Thieme-Stratton has published *The Pediatric Spine*. It is a comprehensive volume which reviews all aspects of pediatric spinal problems, operative and non-operative. The authors are David S. Bradford, M.D. of the University of Minnesota Medical Center and Robert Hensinger, M.D. of the University of Michigan. 544 pages, 858 illustrations, hardcover, $80.

Grune & Stratton is offering five newly published comprehensive surgical atlases in otolaryngology and head and neck surgery. The titles are: *The Atlas of Head and Neck Surgery, The Surgical Atlas of Otology and Neuro-otology, The Atlas of Aesthetic Facial Surgery, The Atlas of Cleft Lip and Cleft Palate*, and *The Surgical Atlas of Airway and Facial Trauma*. The complete set or any combination of the atlases may be ordered on a 30-day free trial.

Gower Publishing has a new book, *Sickness and Sectarianism*. It contains exploratory studies in Medical and Religious Sectarianism. It is edited by R. Kenneth Jones of the University of Botswana. Discussed are such questions as: Are there medical belief systems akin to sectarian ones? How is traditional religion related to health? and Is there a possible association between belonging to a religious sect and being mentally ill? 158 pages, $28.95.

The Olympus Corporation has published an 84-page book, *How to Improve Photography Through the Microscope*. It is profusely illustrated, much of it in full color, and discusses every detail of the meticulous process of good photomicrography. It is crammed with technical information but is designed for understanding by the microscopist who may never have photographed through the microscope. It is offered at $5 by Olympus Microscope Dealers, and is included at no cost with purchases of Olympus photomicrographic equipment.

University Publications of America has released *Changing Values in Medicine*, edited by Eric J. Cassell, M.D., and Mark Siegler, M.D. There are many prominent contributors. They address the foundations of modern medicine, the historical and contemporary physician-patient relationship and future directions for philosophical approaches to medicine. Hardbound edition is $24, softcover $12.

FUTURE FILE

Pathology Annual Meeting

The Annual Meeting of the United States-Canadian Division of the International Academy of Pathology will be held at the New Orleans Hilton, March 10-14, 1986.

Further information about the meeting and courses is available from Dr. Nathan Kaufman, Bldg. C, Suite B, 3515 Wheeler Road, Augusta, Ga. 20909—(404) 733-7550.

Anatomical Workshop

"Surgery for the Aging Face: Focusing on the Issues" is the subject of a symposium and anatomical workshop to be held Jan. 30 to Feb. 2, 1986, at the Hotel Inter-Continental on the Embarcadero, San Diego, Calif.

It will be devoted to the unresolved issues confronting the surgeon who cares for the aging face deformity. Fees are $295 for surgeons, $195 for residents in training, nurses and office assistants. The anatomical workshop is limited to 125 attendants and the fee is $60.

For more information call UnConventional, Inc. at (619) 692-9115.

Assembly in Surgery

The 9th Annual San Diego Postgraduate Assembly in Surgery will meet Jan. 20-24, 1986, at Hotel Intercontinental-San Diego. AMA/CMA credit is for 32 hours.

Write or call the Office of CME, M-017, UC San Diego School of Medicine, La Jolla, Calif. 92093—(619) 452-3940.

Critical Care Medicine

The 15th Annual Society of Critical Care Medicine Educational and Scientific Symposium meets May 27-30, 1986, in Washington, D.C. The program is prepared for Critical Care physicians, nurses, therapists and scientists. AMA Category 1 credit is 40 hours.

The correspondent is Tracy Schultz, 223 E. Imperial Highway, Suite 110, Fullerton, Calif. 92635—(714) 870-5243.

The *Journal of the American Medical Association* publishes a list of CME courses for the United States twice yearly. The January listing features courses offered from March through August; the July listing features courses offered from September through February.

Newborn Symposium

The 19th Annual Newborn Symposium of the University of Louisville's Dept. of Pediatrics will be held Nov. 7-8 in the NKC, Inc. Auditorium, 200 E. Chestnut St., Louisville.

The theme will be "Neurological Problems in the Newborn." John H. Menkes, M.D., University of California, will be the 1985 Distinguished Lecturer and will speak on "Inborn Metabolic Errors in the Neonate" at 11 a.m. on Nov. 7.

Correspondent is Pat Gregg, Dept. of Pediatrics, University of Louisville, Ky. 40292.

Cleft Lip and Palate

"Surgical Techniques in Cleft Lip and Palate" will be the subject of the Annual Course of The Institute of Reconstructive Plastic Surgery, to be conducted Dec. 2-6 at the New York Marriott Marquis Hotel, New York City.

The course carries 30 AMA Category 1 credit hours. Tuition fee is $650, with a $200 discount for physicians in training, upon certification from their chief of service.

The correspondent is Joseph G. McCarthy, M.D., New York University Medical Center, 550 First Ave., New York, N.Y. 10016—(212) 340-5208.

Smokeless Tobacco

A Consensus Development Conference on "Health Implications of Smokeless Tobacco Use" will be held Jan. 13-15, 1986, in the Masur Auditorium at the National Institutes of Health Clinical Center, 9000 Rockville Pike, Bethesda, Md.

Indiana University CME

For the Primary Care Physician

Oct. 15—Diagnosis and Treatment of Infections in Patients with AIDS and Other Immunosuppressed Conditions, Indianapolis.

Oct. 24—Innovative Concepts and Techniques in Clinical Medicine, Richmond.

Oct. 25-26—American College of Physicians—Indiana meeting, Indianapolis. (Scientific session focuses on Gastrointestinal Diseases.)

Nov. 20—Ventricular Arrhythmias, Indianapolis.

For the Specialist

Oct. 31-Nov. 1—Garceau-Wray Orthopaedic Lecture, Indianapolis.

For additional information, contact the CME Division, I.U. School of Medicine—(317) 264-8353.

Infectious Diseases

"Update in Infectious Diseases 1985" will be the subject of a CME course at the University of Wisconsin Clinical Science Center in Madison, Nov. 21-23. AMA Category 1 credit is 19 hours; AAFP credit is pending.

Contact Sarah Z. Aslakson, 465B WARF Bldg., 610 Walnut St., Madison, Wisc. 53705—(608) 263-2856.

Rheumatology Fellowship

Date negotiable—Mini-Fellowship in Rheumatology. Offered by Rheumatology Div., Dept. of Medicine, I.U. School of Medicine; for general internists, family physicians, general practitioners; 40-hour instructional program at I.U. Medical Center; 5 consecutive days, or other arrangements; program helps attain skills for effective office management of common rheumatologic problems, interpretation of relevant laboratory tests and techniques for joint aspiration and local soft tissue injection; includes experience with "team approach" to management of the arthritic patient.

Call K. Brandt, M.D., Rheumatology Div., I.U. School of Medicine—(317) 264-4225.

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WOODROW A. MYERS, JR., M.D.
State Health Commissioner

New information from
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PUBLIC HEALTH NOTES

Sudden Infant Death Syndrome (SIDS) claims the lives of 7,000 infants nationally per year and more than 130 infants annually in Indiana. In 1983 SIDS was the second leading cause of death in Indiana for infants under one year of age. SIDS is the leading, single cause of death among infants between one month and one year of age nationally. Ninety-one percent of SIDS cases occur between the ages of one month and six months of age.

Scientists first defined SIDS in 1969 as the sudden, unexpected death of an apparently healthy infant, in which a thorough postmortem examination fails to demonstrate an adequate cause for death. At most an autopsy reveals minor respiratory inflammation. Between 85 and 95 percent of all cases of sudden and unexpected infant deaths are unexplained by autopsy and therefore diagnosed as SIDS.

The cause of Sudden Infant Death Syndrome has not yet been identified; however, research has resulted in identification of epidemiological information about the victims of SIDS. Research data indicate the incidence of SIDS is higher among low birth weight babies, black infants, American Indian infants, children of low income families and multiple births.

In 1983 the National Institute of Child Health and Human Development completed a five-year epidemiologic study designed to identify infants at risk for SIDS. Preliminary findings demonstrate that the highest rate of SIDS was among infants born to women less than 20 years of age. An increased risk was also demonstrated among infants of mothers who received no prenatal care or who smoked during pregnancy.

Unfortunately, these risk factors are not uniformly helpful in identifying infants at risk for SIDS. Although infants who have these characteristics are at higher risk for SIDS, the majority of infants who have some or all of these risk factors are healthy and do not die of SIDS. In addition, infants who have none of the identified risk factors do die of Sudden Infant Death Syndrome, and the SIDS risk factors also apply to other causes of infant death. Thus, identified risk factors are not specific enough to be used as predictors of SIDS.

Although SIDS cannot presently be predicted or prevented, age and seasonal patterns are somewhat unique to the syndrome. The peak occurrence is two to four months of age with a sharp decline by six months of age. This age pattern is not present with any other major cause of infant death. Seasonally, the rate of Sudden Infant Death Syndrome is higher during the winter months in both the Northern and Southern Hemisphere. Only infant deaths due to infections exhibit such a seasonal pattern.

Although significant progress has been made in both epidemological and biomedical research, the cause or causes of Sudden Infant Death Syndrome remain unknown. Present research efforts are in the area of possible neurologic etiology of SIDS with emphasis on the role of the infant brain stem, prenatal characteristics of infants who eventually die of SIDS, and the relationship of sleep apnea to SIDS. Another reasonable hypothesis is that SIDS may be the result of a breakdown in the integration of the complex regulatory systems required to maintain life. The development of these regulatory systems during the first months of life and their dependence upon genetic factors and environmental influences is a focus of current research efforts.

The sudden and unexpected aspect of SIDS and the lack of determination of the vehicle of death leads to many misconceptions about the cause and lends itself to media sensationalism. Current fallacies include DPT vaccine as an etiology of SIDS, confusion surrounding SIDS and hyperthermia and the relationship of SIDS to apnea in infancy. There is no evidence linking pertussis or the pertussis vaccine to SIDS; in fact, studies indicate that the child who has not been immunized is *more* likely to die of Sudden Infant Death Syndrome. In the United States a thorough autopsy is likely to reveal hyperthemia when it has caused death, as opposed to Sudden Infant Death Syndrome, a diagnosis used when others have been excluded.

Apnea of infancy continues to be a source of confusion among professionals as well as the general public. Apnea of infancy is not synonymous with SIDS and there is no evidence that monitoring an infant will prevent SIDS. Extensive use of apnea monitors has not affected the rate or numbers of SIDS cases.

Although monitors may save the lives of babies with apnea, they are not preventing SIDS. A retrospective comparison of 887 SIDS case histories with their parents' histories taken immediately after the deaths indicates that only five percent of the SIDS cases studied have ever had any recognized apneic episodes of a life-threatening nature. Of all the infants in the medical literature who have been followed due to life-threatening episodes (turning blue, limp, or pale or cessation of breathing requiring CPR) only five percent have gone on after that to die. These data indicate that not more than five percent of the SIDS cases are due to idiopathic apnea.

Research also substantiates that SIDS is not caused by smothering, aspiration of stomach contents, regurgitation, abuse, infections, allergies, pneumonia, or suffocation. The National Institute of Child Health and Human Development Cooperative Study also found that a number of maternal factors suspected of contributing to SIDS were *not* significantly associated with the syndrome. These include urinary tract infections, vaginitis, and venereal disease; use of maternal anesthesia or pain medication; length of first and second stages of labor; and cesarean child birth.

CONTINUED ON PAGE 870

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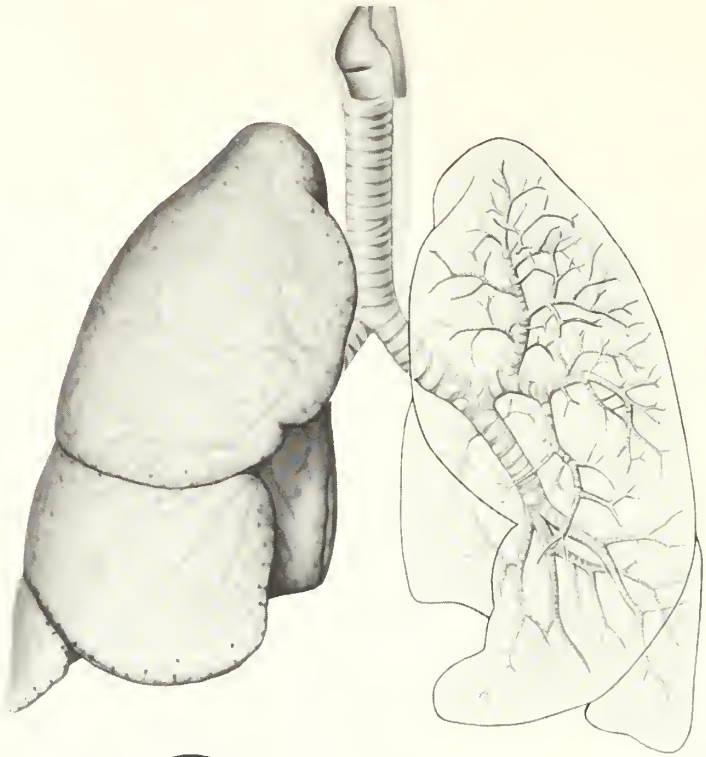
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J-5491 June 1985

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offers effectiveness against the major causes of bacterial bronchitis

H. influenzae, *H. influenzae*, *S. pyogenes*
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Brief Summary: Consult the package literature for prescribing information

Indications and Usage: Ceclor* (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae* and *S. pyogenes* (group A beta-hemolytic streptococci).

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, manage ment should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Precautions: *General Precautions* — If an allergic reaction to Ceclor* (cefaclor, Lilly) occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest* tablets but not with Tes-Tape* (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy — Pregnancy Category B — Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor* (cefaclor, Lilly). There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers — Small amounts of Ceclor have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.18, 0.20, 0.21, and 0.16 mcg/ml at two, three, four, and five hours respectively. Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Ceclor is administered to a nursing woman.

Usage in Children — Safety and effectiveness of this product for use in infants less than one month of age have not been established.

Adverse Reactions: Adverse effects considered related to therapy with Ceclor are uncommon and are listed below.

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70).

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely.

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain — Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic — Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic — Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal — Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

{061782R}

Note: Ceclor* (cefaclor, Lilly) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285

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Carolina, Puerto Rico 00630

4/0644

CANCER CORNER

WILLIAM M. DUGAN, JR., M.D.
Clinical Oncology Center, Methodist Hospital of Indiana

ACS SMOKEOUT: The ninth annual Great American Smokeout is planned for Nov. 21, 1985. The national chairman for this year's event is Larry Hagman, TV's "J.R." on *Dallas*. This program challenges smokers across the country to "Kick the Habit" for at least 24 hours. As a result of the program, many smokers have quit altogether. There is a special urgency to ACS's goal this year as 1985 is predicted to be the first year that lung cancer surpasses breast cancer as a killer of American women. Contact your local unit of ACS for further information.

COLLABORATIVE EFFORTS AGAINST SMOKING: The American Cancer Society, American Heart Association and American Lung Association—the three national voluntary health agencies that have led the smoking control movement—are launching a broad-based attack on "the insidious connections between tobacco and youth." They have selected seven priority areas for cooperative efforts:

1. Removal of indirect tobacco advertising and promotion from the print and electronic media. This may include a drive for legislation to omit human models from print cigarette advertising.
2. Elimination of smoking on all school property and introduction of anti-smoking educational and cessation programs in schools.
3. Strengthen non-smoker protection in public places through voluntary and legislative measures.
4. Increase federal and state cigarette excise taxes.
5. Publicize the new rotational warning labels on cigarettes, which take effect this month.
6. Plan a national coordinating conference for all organizations interested in a smoke-free society by the year 2000.
7. Celebrate with major projects, the 25th anniversary of the Surgeon General's 1968 report on the health hazards of smoking.

ACS CANCER PREVENTION STUDY II: This national study undertaken by the American Cancer Society has revealed some important links between smoking and a woman's reproductive history. From a sample of 25,000 women, it was found that the natural menopause of smokers averaged eight to 13 months earlier than non-smokers. Additionally, conception rates were slightly less in smokers. Miscarriage and stillbirths were 2% greater in smokers.

COMMUNITY CANCER PROGRAM ROSTER: The 1985 edition of the Delegate Roster of the Association of Community Cancer Centers is available by sending $25 (plus $1 for postage and handling) to the ACCC office. Make check payable to ACCC Roster and mail to 11600 Nebel St., Suite 201, Rockville, Md. 20852.

Besides a detailed listing of each delegate institution's major clinical components, this year's edition contains a summary of community cancer programatic activity across the nation. The summary, written by Lee Mortenson, Jane Mortenson, and Eileen Cahill, is titled, "Community Cancer Programs Continue to Expand, Despite Changes in the Health Care System."

I CAN COPE—Cancer Education Series—Sponsored by American Cancer Society. The next series will be held from Oct. 22 to Nov. 7. Classes are held at Northminster Presbyterian Church, 1660 Kessler Blvd., E. Drive, Indianapolis. Classes meet on Tuesday and Thursday at 6:30 to 8:30 p.m. for three consecutive weeks.

This program attempts to help patients and their families cope with the many problems cancer can cause. The I Can Cope program moves people from asking, "What Can I Do?" to stating, "Here is What I Can DO." This program also acquaints patients and their families with the many resources available in the community. For further information, call (317) 923-2225.

FUTURE MEETINGS:

Oct. 21-23: Ninth Annual Cancer Symposium. Sponsored by Scripps Memorial Hospital, at San Diego. Inquiries: Nomi Feldman, Conference Coordinator, 3770 Tansy, San Diego 92121—(619) 453-6222.

Oct. 21-25: Current Concepts in Medical Oncology '85. Sponsored by Memorial Sloan-Kettering Cancer Center, at New York City. Inquiries: Continuing Medical Education Planning Office, C180, Memorial Sloan-Kettering Cancer Center, 1275 York Ave., New York, N.Y. 10021—(212) 794-7654.

Oct. 31-Nov. 1: Genetics in Clinical Oncology. Sponsored by the Laboratory of Genetics, Dept. of Pathology, Memorial Hospital for Cancer and Allied Diseases, at New York City. Inquiries: R.S.K. Chaganti, Ph.D., Memorial Sloan-Kettering Cancer Center, 1275 York Ave., New York, N.Y. 10021—(212) 794-8121.

Central Indiana Oncology Nurse Interest Group meets on the third Monday of each month at 7:30 p.m. at Westview Hospital, 3630 Guion Road, Indianapolis. Anyone interested in oncology is welcome to attend. Cost is $1 per meeting. RNs interested in becoming members of the group have the option of paying $10 annual dues or $1 per meeting.

The purpose of the group is primarily educational. Speakers are asked to talk about their areas of expertise. For additional information, call Susan Sturgeon, president, at (317) 924-6661, ext. 212.

MOTOR VEHICLE SAFETY

Recommendations of the American College of Emergency Physicians

Emergency physicians are usually the first medical professionals to treat victims of motor vehicles accidents. Frequently they also minister to the families of victims who have died or suffered permanent injury.

In reponse to this human loss and tragedy witnessed by emergency physicians every day, the American College of Emergency Physicians (ACEP) has adopted the position that traffic safety measures must be mandated and enforced when possible. Safety laws are not an infringement on individual rights; they are a means to reduce the morbidity and mortality rates stemming from motor vehicle accidents, and to permit reallocation of society's resources to more beneficial programs.

The following laws or regulations should be enacted and enforced:

- Require motorcyclists and riders on all other similar vehicles, including but not limited to mopeds, bicycles, snowmobiles, and all-terrain vehicles, to wear helmets.
- Require motor vehicle drivers and passengers to wear seat belts.
- Require passive restraints in all new car models manufactured after September 1, 1989.
- Require that all children under age 4 or under 40 pounds be restrained in approved child restraint seats whenever riding in a motor vehicle.
- Require for drunk drivers a combination of mandatory rehabilitation programs and mandatory legal sanctions, such as suspension of the driver's license or a defined jail sentence.
- Establish a national legal drinking age of 21.
- Support "Dram Shop" laws that establish liability against any person who serves alcoholic beverages to an individual who is visibly intoxicated.
- Prohibit consumption of alcoholic beverages in motor vehicles.
- Prohibit possession of open alcoholic beverage containers in the passenger compartments of motor vehicles.
- Create a dedicated funding source within states and municipalities from DUI offender fines and fees to increase efforts in enforcement, prosecution, adjudication, education and treatment of offenders.
- Establish an "implied consent" statute that provides that all licensed drivers have given their consent to blood, breath, or urine tests that will determine alcohol or drug concentrations.
- Permit police officers to use preliminary breath tests, and permit these tests to be admitted as evidence in DUI trials.
- Require mandatory testing of alcohol and drug levels of all fatally injured drivers and all drivers who are involved in a fatal or serious personal injury crash in which there is probable cause to suspect substance abuse.

ACEP is strongly committed not only to legislation on these issues, but also the following:

- Public education and awareness programs.
- Education and awareness programs for physicians and other health care professionals.
- Research to determine the causes of automobile accident morbidity and mortality, to identify measures to reduce this morbidity and mortality, and to monitor the effectiveness of public education programs and the impact of legislation.

ACEP encourages its members, as physicians and citizens, to take the lead in motor vehicle safety activities at the local, state, and national levels.

From the American College of Emergency Physicians, P.O. Box 619911, Dallas, Tex. 75261.

ALZHEIMER'S DEMENTIA

Cure of the disease is still out of reach. In as devastating a condition as this, even the most modest relief of symptoms—or for that matter keeping them from getting worse or merely slowing their intensification—is a great contribution to patient and family.

HYDERGINE® LC (ergoloid mesylates) is indicated for patients over age sixty who manifest signs and symptoms of idiopathic mental decline. It appears that individuals who respond to HYDERGINE LC therapy are those who would be considered to suffer from some ill-defined process related to aging or to suffer from some underlying condition such as Alzheimer's dementia.

Before prescribing HYDERGINE therapy, the possibility that the patient's signs and symptoms arise from a potentially reversible and treatable condition should be excluded. In addition, because the presenting clinical picture may evolve to suggest an alternative treatment, the decision to use HYDERGINE therapy should be continually reviewed.

HYDERGINE® LC
(ergoloid mesylates)
liquid capsules, 1 mg

THE ONLY PRODUCT INDICATED FOR ALZHEIMER'S DEMENTIA.

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HYD-1085-13

For Brief Summary, please see following page.

HYDERGINE® LC
(ergoloid mesylates) liquid capsules 1 mg

Indications: Symptomatic relief of signs and symptoms of idiopathic decline in mental capacity (i.e., cognitive and interpersonal skills, mood, self-care, apparent motivation) in patients over sixty. It appears that individuals who respond to HYDERGINE therapy are those who would be considered clinically to suffer from some ill-defined process related to aging or to have some underlying dementing condition, such as primary progressive dementia, Alzheimer's dementia, senile onset, or multi-infarct dementia. Before prescribing HYDERGINE® (ergoloid mesylates), the physician should exclude the possibility that signs and symptoms arise from a potentially reversible and treatable condition, particularly delirium and dementiform illness secondary to systemic disease, primary neurological disease, or primary disturbance of mood. Not indicated for acute or chronic psychosis regardless of etiology (see Contraindications).

Use of HYDERGINE therapy should be continually reviewed, since presenting clinical picture may evolve to allow specific diagnosis and specific alternative treatment, and to determine whether any initial benefit persists. Modest but statistically significant changes observed at the end of twelve weeks of therapy include: mental alertness, confusion, recent memory, orientation, emotional lability, self-care, depression, anxiety/fears, cooperation, sociability, appetite, dizziness, fatigue, bothersome(ness), and overall impression of clinical status.

Contraindications: Hypersensitivity to the drug; psychosis, acute or chronic, regardless of etiology.

Precautions: *Because the target symptoms are of unknown etiology, careful diagnosis should be attempted before prescribing HYDERGINE (ergoloid mesylates) preparations.*

Adverse Reactions: Serious side effects have not been found. Some transient nausea and gastric disturbances have been reported, and sublingual irritation with the sublingual tablets.

Dosage and Administration: 1 mg three times daily. Alleviation of symptoms is usually gradual and results may not be observed for 3-4 weeks.

How Supplied: HYDERGINE LC (liquid capsules); 1 mg, oblong, off-white, branded "HYDERGINE LC 1 mg" on one side, "Ŝ" other side. Packages of 100 and 500. (Encapsulated by R. P. Scherer, N.A., Clearwater, Florida 33518).

HYDERGINE (ergoloid mesylates) tablets (for oral use); 1 mg, round, white, embossed "HYDERGINE 1" on one side, "Ŝ" other side. Packages of 100 and 500.

Each liquid capsule or tablet contains ergoloid mesylates USP as follows: dihydroergocornine mesylate 0.333 mg, dihydroergocristine mesylate 0.333 mg, and dihydroergocryptine (dihydro-alpha-ergocryptine and dihydro-beta-ergocryptine in the proportion of 2:1) mesylate 0.333 mg, representing a total of 1 mg.

Also available: HYDERGINE sublingual tablets; 1 mg, oval, white, embossed "HYDERGINE" on one side, "78-77" other side. Packages of 100 and 1000. 0.5 mg, round, white, embossed "HYDERGINE 0.5" on one side, "Ŝ" other side. Packages of 100 and 1000.

HYDERGINE liquid; 1 mg/ml. Bottles of 100 mg with an accompanying dropper graduated to deliver 1 mg. [HYD–ZZ24 6 15 84]

Before prescribing, see package circular for full product information. HYD-1085-13

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Public Health. . .

CONTINUED FROM PAGE 864

Emphasis in Indiana has been on providing needed support to the grieving families and frustrated physicians SIDS leaves in its wake. The sudden unexpected aspect of SIDS frequently results in feelings of guilt and self-blame for the family. Often physicians also feel frustration and blame themselves when a patient dies of SIDS. The Indiana State Board of Health SIDS project is attempting to support those affected by this tragic death by educating community groups about Sudden Infant Death Syndrome and the impact it has on the family as well as the entire community. This effort was partially supported by an $80,000 federal grant in 1985.

To achieve this goal a Sudden Infant Death Syndrome case management system has been established within each of Indiana's counties. At the hub of this case management system are the coroner, public health nurse and SIDS parent contact. The coroner refers all SIDS cases to the county public health nurse who in turn makes the home visit and refers the case to the local SIDS parent contact for long-term follow-up. Anyone who learns of a case of Sudden Infant Death Syndrome is encouraged to refer the family to the county public health nurse or the state SIDS project. Early intervention is crucial to their prevention of long-term pathological grief or family disintegration. It is not uncommon for families to be accused of causing the baby's death by negligence or abuse. At times spouses blame each other for the infant's death, and frequently the medical care provider is blamed. The public health nurse and parent contact are able to provide accurate facts about SIDS, dispel misconceptions and facilitate a healthy grief process.

Health care providers have an obligation to respond to faulty media coverage in all areas of health care. Correcting erroneous reporting in the area of SIDS is no exception. The Indiana State Board of Health Sudden Infant Death Syndrome project is available to assist health care providers in their follow-up of families and with community education. Call the Sudden Infant Death Syndrome project at 317/633-8463 for assistance.

Warning Issued on Use of Apnea Monitors

THE INDIANA STATE Board of Health is warning physicians and users of a potential danger involving apnea monitors.

In a memorandum to physicians, Dr. T.S. Danielson Jr., director of the ISBH's Division of Maternal and Child Health, said certain precautions are necessary to prevent deaths and serious injuries to infants and children.

He said three apnea monitor accidents recently have been reported in homes where these devices were in use. "In one case, one end of the electric power cord was unplugged from the monitor while the other end was left plugged into a wall socket; at the same time, the leaders were disconnected from the monitor while the infant was still wearing the electrodes. An older sibling then plugged the loose ends of the leads into the live electric power cord (see *Figures 1, 2*) causing the infant's electrocution.

"In the other two cases, young children plugged the loose ends of the leads, in one instance, into a wall socket and, in the other instance, into an electric cord, causing burns," Dr. Danielson explained.

"I would like to stress that these are unusual accidents in which the apnea monitors themselves did not malfunction," he said. To prevent such accidents, he said the apnea monitor user should:

- Never allow the electrode leads to remain attached to the infant unless the leads are also attached to the patient cable or apnea monitor.
- Be sure the electric power cord is unplugged from the wall socket if it is unplugged from the apnea monitor.
- Take steps to prevent young children from inserting any object into electric power cords or wall sockets; for example, safety covers should be inserted into such electric wall outlets.

The Dept. of Health and Human Services, Food and Drug Administration, is working with the apnea monitor manufacturers to develop a permanent solution to this problem.

Questions may be directed to Dr. Lireka Joseph of the FDA at (301) 443-4600 or to Dr. Danielson at (317) 633-8449. Inquiries from families may be referred to Ms. Pam Chissler of the FDA at (301) 443-4190 (Center for Devices and Radiological Health, 5600 Fishers Lane, Rockville, Md. 20857).

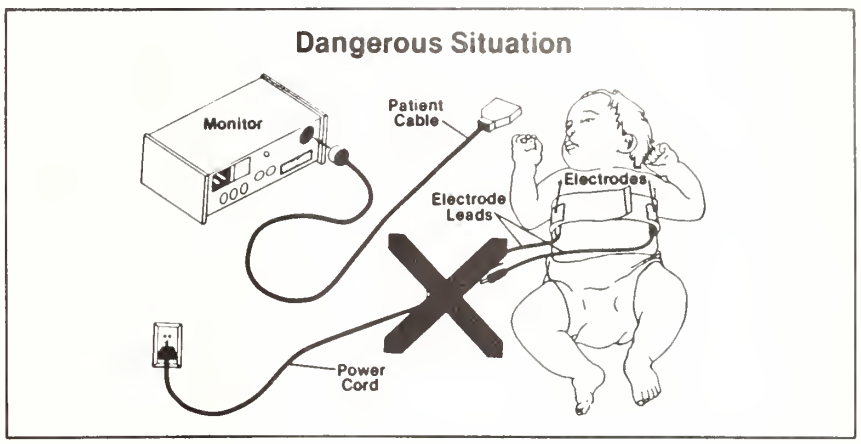


FIGURE 1: This is a situation in which an accident can occur. The electrode leaders can be incorrectly plugged into a power cord instead of into the patient cable as shown in Figure 2. Accidents also can occur when the electrode leads are plugged into other kinds of power cords, such as extension cords, or into wall sockets.

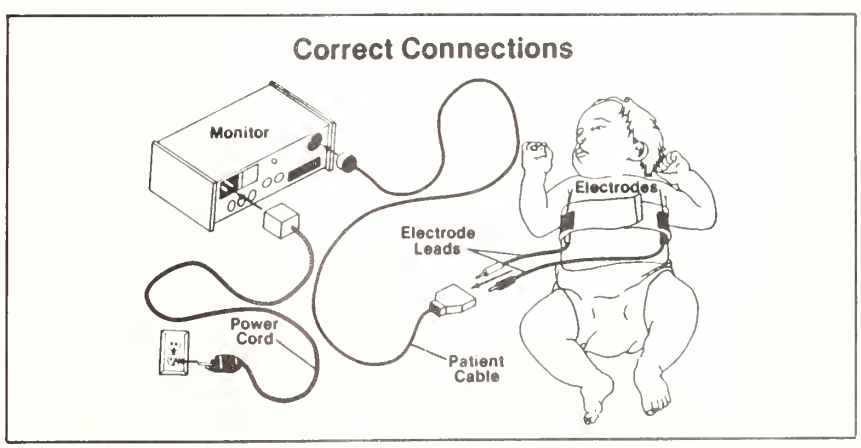


FIGURE 2: This is the correct way to connect an infant to the monitor. The electrode leads are plugged into the patient cable, which in turn connects to the monitor. The monitor is connected to the wall socket by the power cord.

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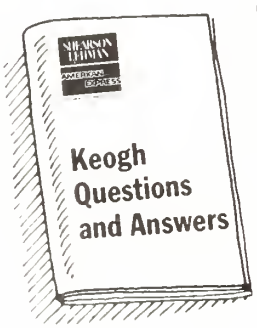
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To obtain Category 1 credit for this month's article, complete the quiz on page 927.



The Child with a Single Seizure

DAVID W. DUNN, M.D.
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THE CHILD WHO presents with a first single seizure is a difficult problem for the clinician because there are no definite answers in the literature for questions about evaluation and therapy. The first problem is distinguishing true seizures from the many non-epileptiform paroxysmal disorders of childhood. This may be particularly difficult after a single episode. The second problem is the outline for an appropriate evaluation. The work-up should efficiently document treatable disorders, and yet not burden the child and family with excessive evaluation. Finally, in the event that the physician feels the child has had a true epileptic seizure, there is controversy about treatment. Some physicians will start a child on anticonvulsants after a first seizure, whereas others may wait until there has been a recurrence.

The difficulty is compounded by the high frequency of single afebrile seizures in childhood. Using the Collaborative Perinatal Project data, Hirtz *et al.* identified 518 children who had seizures after the newborn period and by age 7 years.[1] They found a risk of 6.8/1000 for recurrent afebrile seizures and 4.4/1000 for nonrecurrent afebrile seizures. Ross *et al.* documented an episode of loss of consciousness in 6.7% of 15,496 children surveyed in the English National Child Development study.[2] By the age of 11 years, 21/1000 had a single afebrile seizure and 4/1000 had recurrent afebrile seizures.

In this review, we will briefly discuss the differential diagnosis and appropriate work-up of this problem, and then will attempt to find guidelines for determining the necessity of treatment of the child with a single seizure. This review will concentrate on generalized tonic and clonic seizures (grand mal) and partial elementary or complex seizures (focal motor or psychomotor seizures). Infantile spasms, minor motor seizures, and typical absences (petit mal) are almost always recurrent

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TABLE 1

Differential Diagnosis of Seizures

Infant	Early Childhood	School Age
Apnea	Breath holding	Migraine
Hypoglycemia	Spasmus nutans[7]	Syncope
Brainstem release phenomenon[5]	Paroxysmal vertigo	Tics[10]
Benign myoclonus[6]	Night terrors, sleep walking	Paroxysmal chorea, ataxia
	Cyclic vomiting[8]	Episodic dyscontrol[11]
	Shuddering attacks[9]	Pseudoseizures

and require treatment. The problems are different and will not be considered here. We will also omit neonatal seizures and febrile seizures, as good reviews of the evaluation and management of both are readily available.[3,4]

Differential Diagnosis

A thorough and careful history is of paramount importance in establishing the diagnosis of an epileptic seizure. The differentiation of seizures versus non-epileptiform paroxysmal disorders is based almost entirely on the history. In taking the history, one should question both the child and witnesses to the event. In particular, the physician will be asking about the events that preceded the episode, any warnings the child had of the impending episode, and the condition of the child immediately following the episode. An exact description of the episode itself will probably have to come from witnesses. If the episode was a seizure, one may obtain a general impression of the seizure type and the site of the epileptogenic focus. In particular, the presence of an aura indicates that the seizure is of focal onset, and the presence of postictal confusion helps exclude the diagnosis of classical absence seizures. An outline of the differential diagnosis is given in *Table 1*, and episodes which can be confusing are discussed further.

Breath-holding spells and syncope are occasional sources of confusion. In both breath-holding spells and syncope, there is virtually always a preceding event that triggers the episode. The child with breath-holding is typically 6 months to 3 years of age. The breath-holding attack occurs shortly after the onset of crying. There is usually a prolonged expiration followed by cyanosis and a loss of consciousness. Syncopal episodes occur during an emotionally charged event, physical stress, or a sudden change in posture. Syncopal episodes always occur when the child is standing or sitting. Syncopal episodes occur commonly in early adolescence. Both breath-holding spells and syncope can be associated with short bursts of clonic movements, which do not imply that the episode is a seizure. Though both breath-holding spells and syncopal episodes are usually brief, there can be a period of sleepiness or confusion after an episode.

Childhood migraine is another paroxysmal disorder which can be confused with epilepsy. The usual story of a throbbing headache with associated nausea or vomiting, complete relief with sleep, and a positive family history is enough to make the diagnosis.[12] The question of seizures arises in three forms of migraine. First, the child who has a hemiplegic migraine may be thought to have Todd's paralysis following a focal seizure.[13] Second, the child with a confusional migraine, in which there is an alteration in level of consciousness, may be considered to have a psychomotor seizure.[14] Finally, in the child with migraine who has learned to go immediately to sleep to get rid of headache, there may be concern that this is a postictal period and not just post-migrainous sleep. In each of these three cases, the history alone may not be sufficient to distinguish migraine from seizures, and an EEG becomes important. To complicate matters, there are seizure headaches. These begin abruptly, are accompanied by nausea and vomiting, and are followed by sleep. The lack of an aura, unilateral headache, or family history may help in distinguishing migraine and seizure, but an EEG may be necessary.

Certain paroxysmal disorders can be confused with seizures. The clue to distinguishing benign paroxysmal vertigo of childhood and paroxysmal choreoathetosis from seizures is the lack of alteration in consciousness. The child with paroxysmal vertigo suddenly falls or clings to an object or to his parents, and often describes a sensation of falling or turning. There is no loss of consciousness or postictal confusion after the episode ends. A depressed cold water caloric test suggests a diagnosis of benign paroxysmal vertigo.[16,17] The child with paroxysmal choreoathetosis may have brief, usually less than one minute, bursts of chorea precipitated by movement or startle (kinesigenic choreoathetosis), or longer episodes, minutes to four hours, of dystonic or choreoathetotic movements precipitated by stress, fatigue, or excitement (dystonic choreoathetosis). Consciousness is retained during the abnormal movements and there is no postictal lethargy.[18] The electroencephalogram is normal in both paroxysmal vertigo and in paroxysmal choreoathetosis.

Apnea can be a real problem in a differential diagnosis.[19] This is most commonly a problem of children under 6 months of age. A child may have a period of apnea associated with loss of consciousness, particularly if the episode is prolonged. The majority do not seem to be related to seizures. In one recent series, only 1.2% to 6.1% of the episodes of apnea were epileptic.[20] The incidence of seizure-related apnea was higher in patients

who were neurologically suspect, i.e., those with an abnormal exam or significant developmental delay. Both a pneumogram and an electroencephalogram may be important in helping to make the distinction.

Sleep disorders can be a source of question. Narcolepsy more often is considered in the adult, but can start between 3 years of age and adolescence. These children will have a rapid onset of sleep but can be easily aroused from sleep. Cataplexy may be a part of narcolepsy. With cataplexy there is sudden loss of tone, often triggered by laughter, movement, or excitement. An EEG may be necessary to rule out minor motor or myoclonic seizures. Night terrors occur in stage IV sleep. The episode lasts for usually less than two minutes. The child looks very frightened, does not awake during the episode, and has total amnesia for the nightmare on awakening the following morning. There are no associated tonic or clonic movements and no tongue biting or enuresis which might suggest seizures.

Finally, pseudo seizures or functional seizures may be a source of confusion. These spells may happen during periods of stress and almost always occur when there are witnesses present. There is usually no associated enuresis, tongue biting, or other injury, and the postictal period is limited or nonexistent. During the spell, corneal reflexes and oculocephalic reflexes are present, and plantar responses are down-going. The spells can occasionally be precipitated by suggestion.[21]

After the history, a careful examination with emphasis on neurologic and developmental assessment is done. Certain abnormalities may suggest a particular diagnosis and help further direct your evaluation. These are listed in *Table 2*. A developmental assessment is always a part of the physical examination in the child who has had a seizure.

TABLE 2

Signs Suggesting an Etiology for Seizures

System	Sign	Disorder
General examination	Dysmorphic features	Brain malformation, storage disease
Head	Macrocephaly	Storage disease, hydrocephalus, subdural hematoma, tumor
Hair	Broken, alopecia	Menkes disease, biotin deficiency, argininosuccinic aciduria
Skin	Hypopigmented macules, Cafe-au-lait spots, upper eyelid hemangioma, petechiae	Tuberous sclerosis, neurofibromatosis, Sturge-Weber, blood dyscrasias, meningitis, sepsis
Neck	Nuchal rigidity	Meningitis, subarachnoid hemorrhage, posterior fossa mass
Fundi	Papilledema, hemorrhages	Tumor, trauma, child abuse, hypertensive encephalopathy.
	chorioretinitis retinal lesions	intrauterine infection. degenerative diseases, tuberous sclerosis
Abdomen	Organomegaly	Storage disease
Nervous system	Weakness, hypotonia	Metabolic disorders, systemic disorders, drug intoxication

Laboratory Evaluation

The laboratory evaluation can be used to clarify the differential diagnosis and to establish an etiology for seizure. The laboratory data may help support or reject a particular diagnosis but are never absolute.

Both serum creatine kinase and serum prolactin may be used to help distinguish seizures from non-epileptiform paroxysmal disorders.[22,23] Elevated creatine kinase occurred after 15% of grand mal seizures, and elevated prolactin was documented after 85% of generalized seizures, 43% of partial complex seizures, and 10% of partial seizures. Peak levels occurred 15-20 minutes after an episode. To be useful, prolactin and creatine kinase must be obtained within 30 minutes after an episode and then should be compared with a baseline level obtained between episodes. Elevated levels will suggest a diagnosis of seizure disorder but normal levels do not exclude seizures.

The electroencephalogram is the main test used in determining a differential diagnosis. The presence of epileptiform activities, i.e., spikes or sharp waves, on the EEG supports a clinical diagnosis of epilepsy, but an abnormal EEG cannot be considered pathognomonic for epilepsy nor can a normal EEG rule out a diagnosis of epilepsy.[24] In addition, the EEG should be interpreted conservatively because there are numerous sharp transients mimicking epileptiform activities, i.e., small sharp spikes, psychomotor variant, phantom spikes or 14 and 6 positive spikes. Epileptiform activity may be seen on the EEG of 2.4% of patients without seizures. In comparison, a single EEG on patients with epilepsy demonstrates epileptiform activity in only 50-60%, although the yield of EEG

can be further increased by repeated studies and by various activating procedures, i.e., hyperventilation, sleep, sleep deprivation or photic stimulation.

If the physician is convinced that a child has had a first seizure, and there is no question about a differential diagnosis, the EEG may still be useful. The EEG is important in classification of idiopathic seizures and may help determine the risk of recurrence of seizures. The EEG will not give much additional informaiton in those children who have had a seizure associated with electrolyte disturbances, hypoglycemia or hypocalcemia, nor will it add additional information in those children whose seizures were caused by exposure to drugs or toxins.

The second purpose of the laboratory evaluation is to establish an etiology for seizures. For all children with a probable first seizure, both glucose and calicum levels should be obtained. The yield is low, approximately 6/1000;[25] however, both hypoglycemia and hypocalcemia are treatable disorders which may first present as seizures. Unless treated early, repeated episodes of hypoglycemia may lead to irreversible brain damage. The symptoms and signs of hypoparathyroidism may be too nonspecific to make a diagnosis without checking calcium levels in children presenting with a first seizure.

With the exception of glucose and calcium, the use of other studies is optional and depends upon the history and physical examination. Electrolytes and BUN should be obtained if there is a history of vomiting or diarrhea, or if there is hypertension or dehydration on physical examination. Seizures are rarely associated with thyrotoxicosis, and thyroid function studies should be obtained if there is clinical evidence of hyperthyroidism.[26] A toxicology screen may be important in both the toddler and in the adolescent. Drugs and toxins which may cause seizures are listed in *Table 3*. An amino acid screen should be obtained in the child who has a significant developmental delay of unknown etiology and in the child under 1 year of age who has a first seizure with no apparent etiology.

TABLE 3

Drugs and Toxins Which Cause Seizures[26,27]

- Methylxanthines (theophylline, caffeine)
- Isoniazid
- Antihistamines
- Anticholinergics
- Antipsychotics
- Local anesthetics
- Phenylpropanolamine
- Amphetamines
- Cocaine
- Strychnine
- Camphor
- Chlorinated insecticides
- Water hemlock

A lumbar puncture should be performed if there is fever, nuchal rigidity, decreased mental status, or a history of recent infection for which a child is currently on antibiotics. Seizures occur in the first three to four days in approximately 30-40% of children with meningitis.[29] Seizures are also associated with subarachnoid hemorrhage due to rupture of an aneurysm or arteriovenous malformation, or more commonly as a result of occult trauma as seen in child abuse. A lumbar puncture is necessary for the diagnosis of meningitis or subarachnoid hemorrhage but is otherwise no longer part of the routine evaluation of a first seizure.

studies is small in patients with a single seizure. Roentgenograms of the skull are necessary only in those cases of possible head trauma. The use of computed tomography is more controversial. The incidence of abnormal CT scan findings in both adults and children has ranged from 30-60%.[30,31,32] However, most of the reported abnormalities consist of diffuse or focal atrophies, which may not be relevant to the cause of the epileptic seizures. The incidence of CT scan abnormalities varies with the particular seizure type. Children with purely metabolic seizures, febrile seizures or absence (petit mal) seizures are unlikely to have abnormality on CT scan, whereas children with generalized tonic clonic seizures, partial seizures, infantile spasms or minor motor seizures are more likely to have abnormality on CT scanning. Bachman found CT scan abnormalities in 32% of children with generalized tonic clonic seizures, 43% of children with partial elementary seizures, and 27% of children with partial complex seizures.[33] Gastaut found CT scan abnormalities in all of the children he studied with infantile spasms and in 40% of the children with minor motor seizures.[34] The data suggest that at least one CT scan with contrast injection is necessary in patients with seizures other than febrile seizures, pure absences and isolated metabolic seizures.

Treatment

Having gone through the history, physical examination, and laboratory data, one can usually make a confident diagnosis. If the episode was an epileptic seizure, the next question concerns treatment. When does one start anticonvulsant therapy?

The physician needs to consider the risk of seizure recurrence and possible resultant central nervous system damage, while balancing these risks with the potential side effects of anticonvulsant drug therapy.

There are three studies available which may help determine the risk of further seizures. Hauser *et al.* studied 244 patients, of whom 26% were less than 19 years of age.[35] These patients were followed for a median of 22 months after a first unprovoked seizure. Hauser found an overall recurrence risk of 27% at 36 months after the initial seizure. Patients who had a history of prior neurological insults had a 34% risk of recurrence, whereas patients with idiopathic seizures had a recurrence risk of 26% at 36 months. Among patients with idiopathic seizures, there was a significant in-

crease in risk if patients had an EEG which showed a generalized spike and wave pattern, and if the patients had a sibling with seizures. The recurrence risk was 50% at 18 months for those with a generalized spike and wave pattern on EEG, and was 35% at four months for those who had a sibling with seizures. They did not find that seizure type or abnormalities on neurologic exam predicted recurrence.

Camfield and the group from Dalhousie University in Nova Scotia reviewed 168 children who had an EEG after a first seizure.[36] Overall, they found a recurrence risk of 52%. Recurrence risk was related to type of first seizure, the presence of abnormality on neurologic exam, and the presence of epileptiform activity on EEG. In particular, the children who had a focal seizure disorder had a higher incidence of recurrence than those with a generalized seizure disorder, the children with abnormalities present on neurologic examination had a higher incidence of recurrence than those without abnormality, and those with epileptiform activity on the EEG had a significantly higher chance of recurrence than those with a normal or slow EEG.

The recurrence risk ranged from 30% in children who had a generalized seizure with a normal EEG and normal neurologic exam, up to greater than 90% in those children who had a focal seizure, abnormal neurologic exam, and epileptiform activity in the EEG. The child who had a generalized seizure and only one bad prognostic sign, either an abnormal neurologic exam or an abnormal EEG, had an approximately 50% chance of recurrence.

These data are similar to those obtained by Hirtz and others who reviewed the seizure history for children enrolled in the Collaborative Perinatal Project.[37] They found a 61% risk of recurrence. Unprovoked or asymptomatic seizures more commonly recurred (69%), while children with symptomatic nonfebrile seizures due to head trauma or toxic encephalopathies had a 23% recurrence risk. The seizure type was also important in predicting recurrence. Children with generalized seizures had a recurrence risk of 48%, versus a recurrence risk of 65% in children with focal motor seizures. They did not find age of onset, family history, or neurologic exam to be significant in predicting recurrence.

None of the three studies of recurrence risk gives an outline for decision-making on therapy. There is enough variability to conclude that the decision on anticonvulsant therapy must be individualized for each patient. One must first assess the risk of recurrence with the attendant possibilities of status epilepticus, hypoxia, ischemia or trauma during a seizure. If one elects to use anticonvulsants, it must be with the knowledge that potential side effects occur in 30-40% of the children receiving anticonvulsants. In addition, other factors, such as parental fear of recurrent seizures or of medication and accessibility to medical care in the event of additional seizures, must be considered.

In our opinion, the first step in deciding whether or not to start anticonvulsants is to differentiate provoked versus unprovoked seizures. If the seizure is due to a correctable metabolic disturbance, intracranial infection, exposure to drugs, or the stress of sleep deprivation, febrile illness, or physical or emotional stress, then one may elect not to begin anticonvulsants and to correct the underlying disturbance or advise the family on modifications to prevent stresses which may lower the seizure threshold. If the epileptic seizure was unprovoked or was due to a potentially uncorrectable provoked cause, such as brain tumor or scarring from head trauma, the next step is to evaluate the presence of risk factors for recurrence of seizures.

The studies described previously clearly indicate that the presence of focal abnormalities detected by neurological examinations or CT scanning, a strong family history of epilepsy, the presence of epileptiform activity on the EEG, and clinical descriptions of partial seizures are important risk factors for recurrence and justify initiation of anticonvulsant therapy. If the child has a normal neurologic exam and CT scan, a negative family history of epilepsy, a normal or slow EEG and a clinical description of a generalized seizure, then the risk of recurrence is low and the child may be safely followed without using anticonvulsant therapy.

As a final step in the treatment of the child with a single seizure, whether anticonvulsants have been started or not, we advise the family about risk factors which may lead to additional seizures. We advise families to avoid undue fatigue, sleep deprivation, and medication or drugs which may lower the seizure threshold. We also advise prompt treatment of febrile illnesses to prevent marked rises in temperature. Since the risk of recurrence is highest during the first year after a single seizure, we also ask the child and his family to avoid activities such as driving, rock climbing, or swimming without close observation, which could be potentially dangerous in the event of a seizure.

If anticonvulsants are started and no subsequent seizures occur, we attempt to taper the child off anticonvulsants two years after the initial seizure.

REFERENCES

1. Hirtz DG, Ellenberg JH, Nelson KB: The risk of recurrence of nonfebrile seizures in children. *Neurology*, 34:637-641, 1984.
2. Ross EM, Peckham CS, West PB, Butler NR: Epilepsy in childhood: findings from the National Child Development study. *Br Med J*, 280:207-210, 1980.
3. Volpe JJ: Neonatal seizures. *Clin Perinatal*, 4:43-63, 1977.
4. Fishman MA: Febrile seizures: the treatment controversy. *J Pediatr*, 94:177-184, 1979.
5. Mizrahi EM, Kellaway P: Characterization of seizures in neonates and young infants by time-synchronized electroencephalographic/polygraphic/video monitoring. *Ann Neurol*, 16:383A, 1984.

6. Lombroso CT, Fejerman N: Benign myoclonus of early infancy. *Ann Neurol*, 1:138-143, 1977.
7. Norton EWD, Cogan D: Spasmus nutans; a clinical study of twenty cases followed two years or more since onset. *Arch Ophthalmol*, 52:442-446, 1954.
8. Brown JK: Migraine and migraine equivalents in childhood. *Develop Med Child Neurol*, 19:683-692, 1977.
9. Vanasse M, Bedard P, Andermann F: Shuddering attacks in children: an early clinical manifestation of essential tremor. *Neurology*, 26:1027-1030, 1976.
10. Schowlater JE: Tics. *Pediatr Review*, 2:55-57, 1980.
11. Elliott FA: The episodic dyscontrol syndrome and aggression. *Neurol Cl*, 2:113-125, 1984.
12. Prensky AL: Migraine and migrainous variants in pediatric patients. *Pediatr Cl, NA*, 23:461-471, 1976.
13. Lai C, Ziegler DK, Lansky LL, Torres F: Hemiplegic migraine in childhood: diagnostic and therapeutic aspects. *J Pediatr*, 101:696-699, 1982.
14. Ehyai A, Fenichel GM: The natural history of acute confusional migraine. *Arch Neurol*, 35:368-369, 1978.
15. Swaiman KF, Frank Y: Seizure headaches in children. *Develop Med Child Neurol*, 20:580-585, 1978.
16. Koenigsberger MR, Chutorian AM, Gold AP, Schvey MS: Benign paroxysmal vertigo of childhood. *Neurology*, 20:1108-1113, 1970.
17. Dunn DW, Snyder CH: Benign paroxysmal vertigo of childhood. *Ann J Dis Child*, 130:1099-1100, 1976.
18. Lance JW: Familial paroxysmal dystonic choreoathetosis and its differentiation from related syndromes. *Ann Neurol*, 2:285-293, 1977.
19. Camfield P, Camfield C, Bagnell P, Rees E: Infant apnea syndrome; a prospective evaluation of etiologies. *Clin Pediatr*, 21:684-687, 1982.
20. Clancy RR, Spitzer AR: Cerebral cortical function in infants at risk for sudden infant death syndrome. *Ann Neurol*, 16:396-397, 1984.
21. King DQ, Gallagher BB, Murvin AJ, *et al:* Pseudoseizures: diagnostic evaluation. *Neurology*, 32:18-23, 1982.
22. Wyllie E, Lueders H, Pippenger C, VanLente F: Postictal serum creatine kinase in the diagnosis of seizure disorders. *Arch Neurol*, 42:123-126, 1985.
23. Wyllie E, Lueders H, MacMillan JP, Gupta M: Serum prolactin levels after epileptic seizures. *Neurology*, 34:1601-4, 1984.
24. Goodin DS, Aminoff MJ: Does the interictal EEG have a role in the diagnosis of epilepsy? *Lancet*, 1:837-839, 1984.
25. Wolf SM: Laboratory evaluation of the child with a febrile convulsion. *Pediatrics*, 62:1074-1076, 1978.
26. Korczyn AD, Bechar M: Convulsive fits in thyrotoxicosis. *Epilepsia*, 17:33-34, 1976.
27. Messing RO, Closson RG, Simon RP: Drug-induced seizures: a 10 year experience. *Neurology*, 34:1582-1586, 1984.
28. Garrettson LK: Poisoning. In Pellock JM, Myer EC: *Neurologic emergencies in infancy and childhood*. Philadelphia, Harper & Row, Publishers 1984. pp 155-185.
29. Snyder RD: Seizures in childhood bacterial meningitis. *Ann Neurol*, 16:395-396, 1984.
30. So EL, Perry JK: Epilepsy in adults. *Ann Neurol*, 9:3-16, 1981.
31. Russo LS, Goldstein KH: The diagnostic assessment of single seizures—is cranial computed tomography necessary? *Arch Neurol*, 40:744-746, 1983.
32. Ramirez-Lassepas M, Cipolle RJ, Morillo LR, Gumnit RJ: Value of computed tomographic scan in the evaluation of adult patients after their first seizure. *Ann Neurol*, 15:536-543, 1984.
33. Bachman DS, Hodges FJ, Freeman JM: Computerized axial tomography in chronic seizure disorders of childhood. *Pediatrics*, 58:828-832, 1976.
34. Gastaut H, Gastaut JL: Computerized transverse axial tomography in epilepsy. *Epilepsia*, 17:325-336, 1976.
35. Hauser WA, Anderson VE, Loewenson RB, McRoberts SM: Seizure recurrence after a first unprovoked seizure. *N Engl J Med*, 307:522-528, 1982.
36. Camfield PR, Camfield CS, Dooley JM, Tibbles JAR, Garner B, Fung T: Recurrence after a first unprovoked afebrile seizure in childhood. *Ann Neurol*, 16:370A, 1984.

PATIENTS NEEDED FOR DIABETES RESEARCH STUDY

The Diabetes Research and Training Center, Indiana University School of Medicine, is seeking patients for studies with an experimental aldose reductase inhibitor to determine if this drug will prevent or retard the development of diabetic retinopathy. Aldose reductase inhibitors work by preventing the accumulation of sorbital in tissues including the lens, nerves and retina. They have already been found to prevent metabolic cataracts and to improve diabetic neuropathy in experimental trials. Since the retinal cells accumulate sorbital, this trial is designed to determine if the administration of the drug would prevent retinopathy or retard its progress. The drug is experimental and although no serious side effects have been found, this study will require close follow-up for one to two years. The potential benefit for patients would be close follow-up of their diabetes and retinopathy including retinal photographs and the possible prevention of a serious and disabling complication of diabetes. The trial is in a double-blind format. Otherwise healthy patients with either type I (juvenile) or type II (adult) diabetes are being sought. Patients either without retinopathy or with nonproliferative retinopathy would qualify. Patient referral may be made by calling or having the patients call the Diabetes Center at (317) 630-6374.



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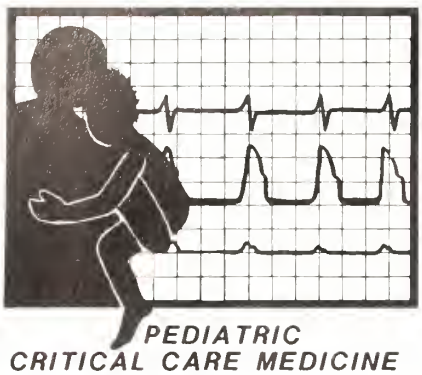
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Neonatal Intensive Care: A Progress Report



PEDIATRIC
CRITICAL CARE MEDICINE

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A STARTLING IMPROVEMENT in both survival and long-term outcome has evolved in neonatal intensive care nurseries in the United States over the past 15-20 years. With the collaboration of our obstetric colleagues, clinical perinatology has emerged and with it has come the destruction of old, artificial barriers between the two specialties. In addition, a coordinated, cooperative system has evolved for providing optimum care for mothers and babies at primary, secondary and tertiary centers, here in Indiana and around the country.

Where survival rates for neonates less than 1,000 grams (about 2 pounds, 3 ounces) were commonly 15-30% for babies born before 1975, survival rates of 40-70%[1,2] are now regularly reported for these extremely tiny patients. Most of these survivors have birth weights of between 800 grams (about 1 pound, 12 ounces) and 1,000 grams, but increasing numbers of infants less than 800 grams have survived in the past few years. Recent data[3] suggest that a remarkably hopeful outcome is possible for most of these "fetal" survivors.

Along with this significant improvement in survival has fortunately come a major reduction in the number of severe neurologically and/or intellectually handicapped preterm survivors of neonatal intensive care. Reports of neurologic and/or intellectual deficits of preterm survivors were usually 25-50% for those cared for from 1947-1960. Recent data indicate no significant handicaps in 80-85%[4] of the recent graduates of neonatal intensive care nurseries, results similar to our own follow-up data. Not unexpectedly, significant factors correlated with survival and intact outcome in one recent study[5] of infants with birth weights 700 grams (about 1 pound, 9 ounces) to 800 grams were a gestation exceeding 26 weeks, the absence of asphyxia, and good initial stabilization, including maintaining adequate body temperature.

Optimum chance for survival and for a normal outcome for the preterm infant, especially the infant less than 1,500 grams (about 3 pounds, 5 ounces), depends on many factors. Two very important points which require special attention include: 1) the avoidance of fetal hypoxia, acidosis and birth trauma, and 2) adequate resuscitation and initial neonatal care. Survival depends on both birth weight and gestational age. Since there are broad ranges between the 10th and 90th weight percentile for each gestational age after about 24 weeks, the likelihood of survival for each individual fetus and the decision about aggressive management must depend on the most accurate assessment of gestational age and fetal weight possible. Determining fetal weight by abdominal palpation is almost impossible and using the LMP to accurately determine gestational age may not be feasible in many cases. Thus, a high level of both technical and clinical expertise in ultrasound must be available to the delivering physician so decisions can be based upon the most accurate information modern technology can provide. Level 3 perinatal centers can provide this expertise, which may necessitate transfer of the high-risk mother. A recent article by Paul and coworkers[6] documented that the incorrect identification of a fetus as "previable" by clinical estimation of fetal weight resulted in a doubling of the mortality rate for these "passively" managed very low birth weight infants as opposed to the more aggressively managed preterm pregnancies.

Several recent studies[7,8,9] have documented 13-26% reductions in neonatal mortality for maternally (in utero) transported neonates compared with those transported after birth. In addition, many studies that could not document a statistically significant decline in mortality did demonstrate shorter hospital stays and lower cost per survivor for in utero transport (an average decrease of 50% in hospital stay and 35% in cost).[10,11] Also, one of these studies[8] revealed an additional advantage of having birth take place at a level 3 perinatal center. A comparison of one and five minute Apgar scores in infants with birth weights less than 1,000 grams at community hospitals versus perinatal centers revealed better five minute scores in the perinatal centers. Seventy-eight percent of outborn transports had five minute Apgars of three or less in contrast to only 43% of the inborn, in utero transports.

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These data indicate that initial resuscitation by a skilled team, present at most perinatal centers, significantly reduces mortality and morbidity for the very low birth weight infant. Delay of delivery until the baby can be transported in utero to the level 3 center should ensure that resuscitation and early neonatal care will take place in an institution staffed and equipped for the high-risk infant. Optimum care at the center should also minimize hypoxia and acidosis as well as birth injury through careful intrapartum monitoring and the consideration of cesarean section after careful analysis of fetal gestation and weight with advanced ultrasound techniques. If delivery cannot be delayed until maternal transport can be accomplished, a skilled resuscitation team should be present. An article in next month's issue of INDIANA MEDICINE by Dr. Mary Jo Stine will review the latest techniques of neonatal resuscitation as well as important principles of initial care of the preterm infant.

Additional data on some specific clinical problems of the very low birth weight (VLBW) infant (i.e., less than 1,500 grams) have provided a better understanding of these problems and their significance for long-term prognosis. For example, neonatal periventricular/intraventricular hemorrhage (PIH) has been found to be an extremely common occurrence in the VLBW infant, noted in about 40% of neonates studied by ultrasounds or CT scans. Many of these tiny neonates are asymptomatic and most of the survivors with small (and even some with large) PIH will be free of neurologic deficits on follow-up.[12]

Recent studies stress the importance of obstetric events in the genesis of PIH. Factors which have been implicated include trauma during vaginal delivery, perinatal asphyxia, trauma or fluid overload during resuscitation, respiratory distress and its treatment, as well as labor itself. One study by Haesslein and Goodlin[13] noted a 22% incidence of PIH for the VLBW infant delivered vaginally versus only 9% when delivered by C-section. Bejar and associates[14] found a 20% incidence of major PIH on cranial ultrasound done on the first day of life for those infants delivered after labor had ensued compared to no major PIH when delivery was by cesarean section without labor. These data suggest that labor may be harmful for the VLBW fetus, but additional, larger studies must be conducted before definitive advice can be given concerning the optimum mode of delivery for fetuses with vertex presentation.

The VLBW breech, on the other hand, has consistently been noted by investigators to have a two-to-seven times higher mortality rate after vaginal delivery than after cesarean section.[15] A paired comparison of breech VLBW infants delivered vaginally and by cesarean section revealed a five times higher incidence of birth trauma and PIH for those delivered vaginally.[16] This seems to provide ample evidence that the potentially salvageable VLBW breech fetus should be delivered by cesarean section, with a generous uterine incision to further reduce the risk of fetal trauma.[13]

Prior to the advent of neonatal intensive care, about three-fourths of the major neurologic defects for the preterm infant were due to spastic diplegia, a symmetric spasticity affecting the legs more than the arms. The incidence of spastic diplegia has decreased precipitously over the past 30 years, with the major decrease occurring within the past 10 years.[17] Although there is no definitive explanation for this decline, better obstetric care and less hypoxic-ischemic injury during birth with improved resuscitation techniques may be responsible.

Finally, the small-for-gestational-age (SGA) or intrauterine growth-retarded fetus has been of particular concern because of numerous reports indicating a significantly higher incidence of neurologic impairment in full-term SGA infants compared to preterm appropriate-for-gestational-age infants. Fitzharding and Steven[18] in 1972 reported unfavorable neurologic and developmental outcomes for SGA infants less than 1,500 grams at birth or less than 30 weeks gestation. A very recent study following a group of nonasphyxiated SGA term newborns through adolescence[19] concluded that these infants had a good prognosis for neurologic and cognitive development. This study suggests that perinatal asphyxia, which occurs frequently in SGA infants, has potentially catastrophic long-term effects in this population. The preterm SGA fetus would be even more prone to the damaging effects of asphyxia, and this implies the need for a very high index of suspicion of distress for these fetuses.

The information presented here should provide incentive for optimum care for any potentially salvageable VLBW fetus, since recent reports of outcomes would clearly seem to justify an aggressive approach to their care in the perinatal period. These data also suggest that optimum care of the VLBW infant is expeditious in utero transport (or, if not feasible, neonatal transport) to a level 3 center. This ensures early resuscitation and care in a center staffed and equipped for the high-risk mother and infant. Failure to offer this aggressive approach may return us to the previous era of physician inaction that denied care to the fetus and newborn infant and resulted in an "unyielding mass of fetal wastage, neonatal death, and perinatal damage."[20]

REFERENCES

1. Cohen RS, Stevenson DK, Malachowski N, *et al*: Favorable results of neonatal intensive care for very-low-birth-weight infants. *Pediatrics*, 69:621, 1982.
2. Hoskins EM, Elliot E, Shennan AT, *et al*: Outcome of very-low-birth weight infants born at a perinatal center. *Am J Obstet Gynecol*, 145:135, 1983.
3. Bennett FC, Robinson NM, Sells CJ: Growth and development of infants weighing less than 800 grams at birth.

Pediatrics, 71:319, 1983.
4. Knobloch H, Malone A, Ellison PH, *et al*: Considerations in evaluating changes in outcome for infants weighing less than 1,501 grams. *Pediatrics*, 69:285, 1982.
5. Bennett-Britten S, Fitzhardinge PM, Ashby S: Is intensive care justified for infants weighing less than 801 gm at birth? *J Pediatr*, 99:937, 1981.
6. Paul RH, Koh KS, Monfared AH: Obstetric factors influencing outcome in infants weighing 1,001 to 1,500 grams. *Am J Obstet Gynecol*, 133:503, 1979.
7. Harris TR, Isaman J, Giles HR: Improved neonatal survival through maternal transport. *Obstet Gynecol*, 57:500, 1981.
8. Cordero L, Backes CR, Zuspan FP: Very low birth weight infant. 1. Influence of place of birth on survival. *Am J Obstet Gynecol*, 143:533, 1981.
9. Miller TC, Densberger M, Krugman J: Maternal transport and the perinatal denominator. *Am J Obstet Gynecol*, 147:19, 1983.
10. Modanlou HD, Dorchester W, Freeman RK, *et al*: Perinatal transport to a regional perinatal center in a metropolitan area: Maternal versus neonatal transport. *Am J Obstet Gynecol*, 138:1157, 1980.
11. Anderson CL, Aladjem S, Ayote O, *et al*: An analysis of maternal transport within a suburban metropolitan region. *Am J Obstet Gynecol*, 140:499, 1981.
12. McMenamin JB, Shackelford GD, Volpe JJ: Outcome of periventricular-intraventricular hemorrhage with apparent intraparenchymal hemorrhage in the preterm infant. *Pediatr Res*, 17:326a, 1983.
13. Haesslein HC, Goodlin RC: Delivery of the tiny newborn. *Am J Obstet Gynecol*, 134:192, 1979.
14. Bejar R, Curbelo V, Coen R, *et al*: Large intraventricular hemorrhage (IVH) and labor in infants ≤ 1,000g. *Pediatr Res*, 15:649, 1981.
15. Smith ML, Spence SA, Hull D: Mode of delivery and survival in babies weighing under 2,000 grams at birth. *Br Med J*, 281:118, 1980.
16. Duenholter JH, Wells CE, Reisch JS, *et al*: A paired controlled study of vaginal and abdominal delivery of the low birth weight breech fetus. *Obstet Gynecol*, 54:310, 1979.
17. Davies PA, Tizard JPM: Very low birthweight and subsequent neurological defect (with special reference to spastic diplegia). *Dev Med Child Neurol*, 17:3, 1975.
18. Fitzhardinge PM, Steven FM: The small-for-dates infant: I. Later growth patterns. *Pediatrics*, 49:671, 1972.
19. Westwood M, Kramer MS, Munz D, *et al*: Growth and development of fullterm nonasphyxiated small-for-gestational-age newborns: Follow-up through adolescence. *Pediatrics*, 71:376, 1983.
20. Cassady G: Impact of neonatal intensive care on quality of life. In Aldajem S, Brown AK (eds.). *Clinical Perinatology* (1st ed). St. Louis: Mosby, 1974, p. 422.



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Clinico-Pathologic Conference

32-Year-Old AIDS Patient with Progressive Pulmonary Infiltrates

Edited by DOUG REX, M.D.
Indianapolis

Grand Rounds—Indiana University School of Medicine

Dr. Rex is Chief Resident in Medicine, Indiana University Hospital W-587, 926 W. Michigan St., Indianapolis, Ind. 46223.

This is an edited transcript of the clinicopathologic conference conducted May 5, 1985 during a Grand Rounds session of the Dept. of Medicine, Indiana University School of Medicine.

Discussants:

Arthur White, M.D., Dept. of Medicine;
Vernon Vix, M.D., Dept. of Radiology;
James Smith, M.D., Dept. of Pathology;
Kathleen Warfel, M.D., Dept. of Pathology.

About the discussants: Dr. White is Professor of Medicine and Director of the Div. of Infectious Disease at the I.U. Medical Center; his current research interest is in human immune response to infection. Dr. Vix is Professor of Radiology at Indiana University Hospital; his remarkable skills as a clinical radiologist and teacher recently earned him a joint appointment in the Dept. of Medicine. Dr. Smith is Professor of Pathology and Director of the Microbiology Resource Committee of the College of American Pathologists; his research is in *Pneumocystis carinii*, infections in compromised hosts and diagnosis of parasitic diseases. Dr. Warfel is Associate Professor of Pathology and Director of the Autopsy Division at Indiana University Hospital; her recent work has been in the electron microscopy of skin diseases.

A 32-YEAR OLD HOMOSEXUAL male with known acquired immunodeficiency syndrome (AIDS) was admitted for further evaluation of weight loss, fever and diarrhea. He was born in Indiana but had recently lived for several years in New York City and then San Francisco. He had a past history of acute infection with hepatitis A and B, recurrent oral and genital herpes, recurrent oral candidiasis, one episode of amebiasis and on one occasion had cryptosporidia identified in a stool sample. Fifteen months prior to admission he was evaluated at a California hospital for diffuse lymphadenopathy, a 30-pound weight loss, diarrhea and fever. An extensive evaluation failed to determine an infectious etiology of his illness and symptomatic treatment was prescribed. The ratio of T-helper to T-suppressor lymphocytes was 0.08.

Four months prior to admission here he was treated for severe oral herpes and associated facial cellulitis with *Staph aureus* bacteremia. He responded and was discharged on long-term suppressive therapy with oral acyclovir and ketoconazole. Four weeks later he was readmitted with anemia (Hgb 6.5 gm/100 ml), high fevers, drenching night sweats and continued weight loss. A culture of the lip lesion taken several weeks earlier grew *Mycobacterium avium-intracellulare*. A bone marrow aspirate demonstrated a positive immunofluorescent stain for acid fast bacilli and established disseminated mycobacterial infection. The organism demonstrated *in vitro* resistance to ethambutol and ethionamide but was sensitive to other routinely tested drugs. Isoniazide, streptomycin, ethambutol, ethionamide, cycloserine and ansamycin were started. Hallucinations required temporary discontinuation of the cycloserine and later ethionamide was discontinued because of lower extremity paresthesias.

The MCV was 88 and the blood smear demonstrated normal red cell morphology. The serum Fe was < than 10 (nl 42-135), the TIBC 159 (nl 250-400) and the stool Hematest was negative. The reticulocyte count was 1.5% and serum and urine markers of hemolysis were normal. A bone marrow aspirate demonstrated normal cellularity and iron stores. He was discharged after three weeks but required multiple outpatient blood transfusions.

The fevers and night sweats abated and he began to gain weight. Three weeks prior to admission an immunofluorescent stain of a bone marrow biopsy was negative for acid fast bacilli. The biopsy demonstrated 5-10% of normal marrow cellularity and therefore ansamycin was discontinued.

Despite discontinuation of ansamycin, continued transfusions were required and, additionally, six days before admission the WBC fell to 1200/mm^3. Two days prior to admission he developed profound weakness, dysphagia, a sore throat and severe watery diarrhea.

Examination revealed a cachectic white male with severe chilling. The supine blood pressure was 82/54 mm Hg and the pulse 96. Sitting the blood pressure was 60/0 and the pulse 112. Respirations were 20 and the temperature 38.7°. There was florid oral thrush. Slightly tender, mobile lymph nodes measuring up to 1 cm in

size were noted in the anterior neck and inguinal areas bilaterally. Multiple shallow ulcers were present on the buttocks but there was no perirectal fluctuance or marked tenderness. The remainder of the examination was normal.

The Hgb was 9.9 gm/100 ml and the WBC 600/mm^3 with 12% band forms, 40% polymorphonuclear leukocytes, 46% lymphocytes and 2% eosinophils. The platelet count was 175,000. The alkaline phosphatase was 46 IU/ml, the serum glutamic oxalo acetic transaminase 45 IU/ml, the bilirubin 0.4 mg/100 ml, the albumin 2.2 gm/100 ml, and the creatinine 0.7 mg/100 ml. A CXR showed slight blunting of the right costophrenic angle.

Stool examination for ova and parasites and cryptosporidia as well as cultures for enteric pathogens, campylobacter and *Yersinia enterocolitica* were negative. Herpes type II was isolated from a peri-rectal lesion and intravenous acyclovir was initiated. Routine sputum and blood cultures were negative. On hospital day 6 a stool smear was positive for acid fast bacilli and a *Clostridium difficile* toxin titer returned positive.

On hospital day 7, dyspnea developed and a CXR demonstrated a right pleural effusion and right lower lobe infiltrate. On 40% inspired oxygen the PO_2 was 73, the PCO_2 was 28 and the pH 7.47. Thoracentesis demonstrated 98 WBC/mm^3, all polymorphs. Pleural fluid to serum ratios of protein and LDH were 0.6 and 0.9, respectively. Bronchoscopy demonstrated purulent secretions in the right lower lobe bronchus and washings showed acid fast bacilli and pseudohyphae and true hyphae consistent with aspergillus. Transbronchial biopsy specimens were inadequate. Ansamycin was restarted and clofazamine, amphotericin-B, and intravenous trimethoprim-sulfa were initiated. Over the next 24 hours the pulmonary infiltrates progressed (*Figure 1*) and the hypoxemia worsened. The patient was presented the options and desired that an aggressive approach be continued. A diagnostic procedure was performed.

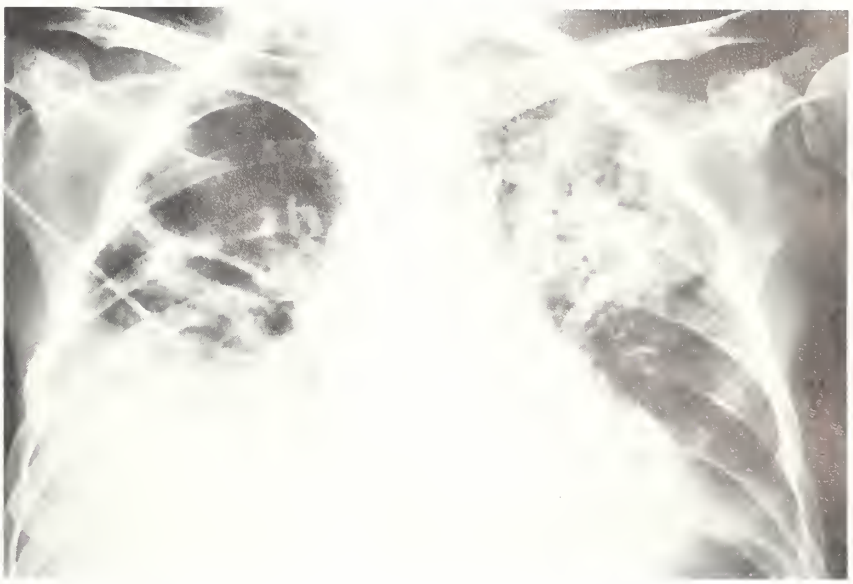


FIGURE 1: Chest radiograph shows progression of the infiltrates to involve the left upper lobe.

Dr. Vix: The chest x-rays are not subtle. A pre-admission chest film was normal. On the admission day there was a blunted right costophrenic angle. This was followed by a right lower lobe infiltrate and a large right pleural effusion on hospital day 7. After the bronchoscopy the infiltrates progressed within 24 hours to involve the left upper lobe (*Figure 1*). This rapid progression is most consistent with an infectious process.

Dr. White: In summary, we have a cachectic young male with AIDS and bone marrow suppression who has chronic infection with *Mycobacterium avium-intracellulare* and who now develops rapidly progressing pulmonary infiltrates. He had bronchoscopy and attempted but unsuccessful transbronchial biopsy. The washings indicated pulmonary infection with mycobacteria and aspergillus. Amphotericin-B was started and trimethoprim-sulfa was added empirically. Despite this, his illness progressed and a diagnostic procedure, almost certainly open lung biopsy, was performed.

This case illustrates several of the problems we are encountering in AIDS patients, particularly that of making a specific diagnosis of their infections when they may be infected with a great variety of organisms. Often the only method to identify all the offending agents is for the pathologist to examine the infected tissue. With that in mind I will review the principal infections that occur in AIDS and hopefully from this list and the clinical facts in this case I can surmise the most likely infection in this patient.

We now understand that AIDS results from infection with a Human T-cell Lymphotrophic Virus which has been designated HTLV-III.[1] This is to distinguish it from HTLV-I, which causes an adult T-cell lymphoma[2] and HTLV-II, which has been linked to a T-cell variant of hairy cell leukemia.[3] HTLV-III infects the T-lymphocyte subset called helper cells which bear the OKT4 surface antigen (OKT4+). This is in distinction to the T-suppressor (OKT8+) subset of human

lymphocytes, which are largely spared by the HTLV-III virus. Infection and destruction of the T-helper lymphocyte class by HTLV-III leads to a profound impairment of cell mediated immunity. Thus, bacterial infections are relatively uncommon, while fungal, viral, protozoan and mycobacterial infections are frequent and often severe. As will be seen, the level of clinical immunosuppression in AIDS is unique. Several infections common in AIDS patients (e.g., disseminated *Mycobacterium avium-intracellulare* and chronic cryptosporidiosis) are seldom seen in other immunosuppressed groups (transplant patients, patients with lymphoma/leukemia, patients on steroids or other immunosuppressives). In addition, the burden of infecting organisms in many AIDS patients is often truly massive relative to other immunosuppressed states.

Infection with HTLV-III can actually result in several clinical syndromes. A number of patients with documented infection are asymptomatic. Infection may result in the so-called Chronic Lymphadenopathy Syndrome which is defined as the presence of lymphadenopathy of three or more months duration in at least two extrainguinal sites in a male homosexual without illness or drug use to account for the lymph node enlargement. Biopsy of these nodes will show reactive hyperplasia. A second syndrome is designated AIDS-Related Complex (ARC) and consists of a group of symptoms occurring in patients in high risk groups which may include fatigue, generalized lymphadenopathy, fever, diarrhea, weight loss, anemia, thrombocytopenia, lymphopenia, leukopenia and oral thrush. ARC may continue for weeks or months. Some patients with ARC recover spontaneously, but about one in six of these patients has progressed to develop the syndrome of "full blown" AIDS. The Centers for Disease Control currently defines "full blown" AIDS by a surveillance definition composed of clinical criteria (*Table 1*). The diseases in *Table 1* are characterized by signifying an underlying defect in cell mediated immunity. To satisfy the criteria, patients should not belong to another immunosuppressed group. This includes patients with lymphoreticular malignancies, transplant patients and those receiving immunosuppressive agents.

TABLE 1
Diseases in CDC Surveillance Definition of AIDS

Tumors:
- Kaposi's Sarcoma – age < 60
- CNS lymphoma

Infections:
- Protozoan
  - *Pneumocystis carinii* pneumonia
  - *Toxoplasma gondii*
  - chronic cryptosporidiosis
- Mycobacterial
  - *Mycobacterium avium-intracellulare*
  - *Mycobacterium tuberculosis*
- Viral
  - cytomegalovirus
  - Herpes simplex or zoster
- Fungal
  - esophageal candidiasis
  - *Cryptococcus neoformans*

HTLV-III continues to spread in epidemic fashion through the populations at risk. These include homosexual males (73% of cases), IV drug abusers (17%), Haitians who are neither homosexuals nor IV drug abusers (4%), and hemophiliacs (1%). Infection with HTLV-III can be documented by detecting antibody to the virus. Testing of stored sera indicates that in 1978 only 1% of male homosexuals in San Francisco had antibody to the virus. By 1984 this number was 65%, including 55% of asymptomatic male homosexuals.[4] Since the latent period before development of clinical disease may be several years, this suggests that nationwide there is an enormous reservoir of infected individuals in whom AIDS may arise. Preliminary data suggest that 10% of seropositive persons will develop AIDS during a two-year follow-up period.[5] Even if this estimate is high, we must recognize the possibility of large scale evolution to "full blown" disease. Thus far, the number of new cases has been doubling approximately every six months, with no signs of leveling off. In Indiana we have had relatively few AIDS patients (37) compared to New York or San Francisco, yet enough that we have considerable experience with the disease. We have seen a number of patients who acquired the disease elsewhere but clearly a few who acquired it in Indiana.

With these preliminaries in mind, let us consider our patient. Kaposi's sarcoma (KS) has been seen in this country for decades as an indolent tumor of elderly males. When occurring in a more aggressive form in patients under age 60 it suggests AIDS. Twenty-one percent of AIDS patients present with KS without concurrent infection with *Pneumocystis carinii* pneumonia (PCP). This subgroup is more prominent in homosexual males and carries a better prognosis than the 56% of AIDS patients presenting with PCP without concurrent KS. KS affects the skin and gastrointestinal tract predominantly, but may also affect the lungs.[6] The clinical and x-ray presentation may be indistinguishable from infection. Diagnosis is by open lung biopsy and is of some importance since radiation therapy and chemotherapy are of value. However, pulmonary KS without skin involvement is exceedingly rare.[6] I exclude the diagnosis on this basis in our patient.

PCP must be considered likely in any AIDS patient with pulmonary infiltrates. PCP is found at presentation in 56% of AIDS patients, and occurs in 70% at some time during the course of illness. Profound hypoxemia and rapid development of diffuse infiltrates is common. The diagnosis can be made by visualizing the stained organism in bronchoscopic washings but failures occur with this method. Bronchoalveolar lavage with or without transbronchial biopsy or open lung biopsy are generally required. This patient was treated

for three days with trimethoprim-sulfa before his diagnostic procedure, and during this time he worsened. This does not argue against PCP. Although trimethoprim-sulfa is highly effective against PCP in transplant patients and leukemics, it is often ineffective against PCP in AIDS patients. Additionally, many serious toxic reactions to the drug occur in AIDS patients.[7] Some have suggested that pentamidine should be the drug of choice in AIDS patients with PCP, but this drug is also toxic and not always effective. Seventy-five percent of AIDS patients with PCP will continue to have histologically florid PCP with copious organisms despite two-three weeks of any drug therapy.[8] The best course to follow is not clear, but most clinicians still prefer trimethoprim-sulfa as the initial therapy. Dapsone and difluoromethylornithine have activity and are alternatives in desperate situations. Overall, 70-80% of patients with PCP and AIDS will improve with therapy, but there is a 20% relapse rate. If endotracheal intubation is required, only 15% will survive. On the basis of statistics alone and a compatible clinical picture, PCP is the most likely cause of this patient's pneumonitis.

As indicated in *Table 1*, other protozoal infections occur in AIDS. Of note, our patient had a history of cryptosporidiosis and had diarrhea at the time of entry into the hospital. This organism was only recognized as a pathogen in humans in the last decade, but is now recognized as a cause of diarrhea in both normal and immunosuppressed patients. In normals it causes an acute, self-limited diarrhea, lasting two-three weeks, and is particularly common in children. Clinical illness occurring in healthy hospital personnel in close contact with infected AIDS patients is well documented and reinforces the need for meticulous isolation of body fluids from these patients. In AIDS patients infection causes a chronic profound diarrhea. The organism can be adequately tested for by appropriate stains of stool,

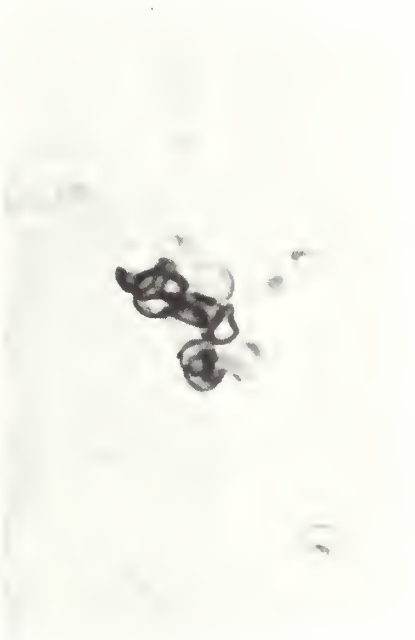


FIGURE 2: Cysts of *Pneumocystis carinii* in lung section. (methenamine silver nitrate, oil immersion).

which were negative in our patient. This is of some importance since at I.U. Hospital we have identified disseminated disease in one patient in whom the organism was found in stool, biliary secretions and sputum. Spiramycin has been advocated, but its efficacy is not clearly established.

Highly disseminated *Mycobacterium avium-intracellulare* (MAI) infections are very common in AIDS patients. These infections are truly massive, with literally sheets of organisms visible on biopsy of liver, bone marrow or lymph nodes. Positive cultures of stool and even blood are common.[9] Infection of this degree with MAI is simply unheard of in non-AIDS patients. MAI usually shows *in vitro* resistance to multiple drugs, including INH and rifampin, and this patient's organism was unusually sensitive. A multiple drug regimen is always required to control the disease and in this case experimental drugs, ansamycin and clofazamine, were included. Even with multiple drugs, control in AIDS patients can seldom be achieved. MAI infects the lungs and almost certainly would be identified by lung biopsy in our patient. However, I doubt it was the cause of his downward spiral. MAI typically causes a chronic infection in AIDS patients which may be fatal over many months but seldom produces the rapid progression of infiltrates seen in this case. There is no doubt, though, that it greatly contributed to his general debilitation.

Could a viral infection produce pulmonary compromise of this type? Chronic mucocutaneous herpes simplex infection is common in AIDS patients, but fortunately it responds to acyclovir and recurrences can often be prevented with long-term oral acyclovir suppression. This patient had a severe oral herpes infection four months prior to admission which was treated with acyclovir. At the time of admission he had a single lesion on his buttocks which grew herpes simplex II, but overall his skin lesions were fairly well controlled. This makes disseminated herpes quite unlikely and, although herpes tracheobronchitis and pneumonia occur, they are rare.[10]

Cytomegalovirus (CMV) could cause or contribute to this picture. Like PCP, it causes diffuse infiltrates, usually in an interstitial pattern. Disseminated disease affecting liver, lymph nodes and the CNS, particularly the retina, may be present. Diagnosis is made by showing the characteristic intranuclear inclusion bodies in tissue stains, or by culture of sputum or tissue. Acyclovir is ineffective against CMV but a new drug, 9-2 hydroxy-1 ethoxymethyl guanine, structurally similar to acyclovir, offers some hope for the future. I cannot exclude CMV as contributing to his pulmonary inflitrates.

Fungal infections in the CDC criteria for AIDS include esophageal but not oral candidiasis, and disseminated cryptococcosis. Our patient had severe oral thrush and also had dysphagia. We may presume he had esophageal candidiasis, since recent evidence indicates that AIDS patients with oral thrush generally have esophageal can-



FIGURE 3: A slice through the mesentery shows it to be filled with enlarged nodes. They were not matted together and before fixation had an opaque, homogeneous, yellow-tan appearance.

didiasis regardless of the presence or absence of esophageal symptoms.[11] He had these findings despite suppressive therapy with ketoconazole. Suppressive therapy with ketoconazole in AIDS patients is hazardous and should only be used for patients with oral symptoms that do not respond to topical anti-fungals or who have significant esophageal symptoms. Ketoconazole is often ineffective against esophageal disease in AIDS patients[12] and is hepatotoxic. If effective the disease will invariably recur with discontinuation of the drug. In addition, the risk of dissemination of candida from the esophagus is low in AIDS patients. Pulmonary candidiasis is unlikely.

Disseminated cryptococcosis, like esophageal candidiasis, occurs in non-AIDS patients with some frequency. Pulmonary cryptococcosis is well described but would not be likely to cause this rapid progression of infiltrates.

Likewise, I consider pulmonary histoplasmosis unlikely in this case. However, clinicians should be aware that while histoplasmosis is rare in the AIDS literature from the coasts, it is one of the most frequent infections in AIDS patients in Indiana.[13]

I must include invasive pulmonary aspergillosis in the differential, as hyphae and pseudohyphae consistent with this organism were evident in the bronchoscopic washings. Here again, I must invoke the rule of multiple infections in AIDS patients. I believe aspergillosis of some degree was likely evident, probably in the right lower lobe where the washings were taken. However, aspergillosis would be unlikely to progress to disseminated infiltrates in such a short time. Nevertheless, in light of the bronchoscopic washings, I believe treatment with amphotericin-B was correct.

What about bacterial infections? These are not prominent in AIDS, but this man was granulocytopenic, which is not a part of AIDS per se and which could have predisposed him to bacterial pneumonia. The reason for the low granulocyte count is not certain. He had diminished marrow cellularity, which first affected red cell production primarily. I suspect it was drug related, perhaps ansamycin. The progression of the infiltrates was consistent with bacterial pneumonia, but in the absence of broad spectrum antibiotics we would expect positive sputum examinations and in many cases positive blood cultures. We are not told whether the bronchial washings were specifically examined and cultured for *Legionnella pneumophila*. Legionnaire's disease is uncommon in AIDS, but in the face of marked granulocytopenia and severe pneumonia it should be considered.

I consider PCP the most likely cause of his acute pulmonary disease. The diagnostic procedure was certainly an open lung biopsy. I would expect other organisms to be identified: almost certainly MAI and possibly CMV.

Dr. Arthur White's diagnosis:

1) *Pneumocystis carinii* pneumonia

2) *Mycobacterium avium-intracellulare* pneumonia

3) possible cytomegalovirus pneumonia

Dr. Smith: The diagnostic procedure was an open lung biopsy which was diagnostic of massive PCP. A methenamine silver stain (*Figure 2*) demonstrates the cysts of Pneumocystis and their intracystic organisms. This finding is pathognomonic. Marked alveolar cell hyperplasia is evident and the alveoli are filled with an

eosinophilic material which is characteristic in PCP. This material is very tenacious and is not easily removed from the alveoli and probably explains why tissue examination is more likely to demonstrate the organism than bronchial washings. True bronchoalveolar lavage, in which the bronchoscope occludes the bronchus prior to lavage, is also more effective than simple bronchial washing collections.[14] PCP was the principal pulmonary infection.

Acid-fast organisms were also found on open lung biopsy, and MAI grew from the tissue. Aspergillus, which was present in the bronchial washings, was not present in the open lung biopsy. Morphologic evidence of CMV infection was not present, but CMV did grow in culture from the lung tissue. Further stains and cultures as routinely performed under our immunosuppressed protocol did not reveal other infecting organisms.

We presently have data on infections in 27 of the 37 AIDS patients from Indiana. Of these 27, 13 had PCP and, consistent with the national experience, PCP is the most common cause of death in AIDS patients in Indiana. Eleven had mycobacteria, 10 candida infections, 7 histoplasmosis, 3 cryptosporidiosis, 5 herpes simplex, 2 CMV, 1 nocardia and 1 cryptococcosis.

Anatomic Diagnosis:

1) *Pneumocystis carinii* pneumonia
2) *Mycobacterium avium-intracellulare* pneumonia
3) Cytomegalovirus pneumonia

Dr. Rex: After the open lung biopsy pentamidine was started, since he had clinically not responsed to trimethoprim-sulfa. His chest x-rays improved somewhat but his overall condition worsened, he became obtunded and died five days after the biopsy. Dr. Warfel performed an autopsy and will review some of the findings.

Dr. Warfel: Although clinically PCP appeared to be the direct cause of death, the most impressive infection by

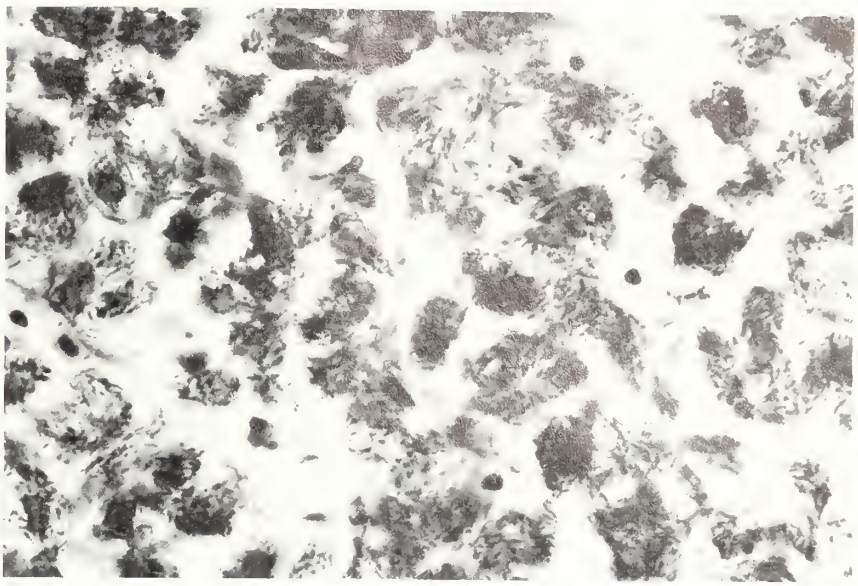


FIGURE 4: Section of lymph node showing replacement by histiocytes. The cytoplasm of each histiocyte is packed with acid-fast bacilli. (Ziehl-Neelsen, X400).

volume was MAI. Pathologically, MAI infection in AIDS patients is characterized by truly massive collections of histiocytes. Massive histiocytosis of lymph nodes was most marked in the mesenteric (*Figure 3*) and retroperitoneal nodes but also in mediastinal and peripheral nodes. Microscopically, there was essentially no follicular architecture remaining to the nodes but only masses of histiocytes were seen, all chocked full of acid-fast organisms (*Figure 4*). No granulomas were found. The spleen was extensively involved by histiocytosis, especially in the white pulp. Histiocytes, each containing incredible numbers of mycobacteria, filled the lamina propria and separated the mucosal glands of the small intestine and colon, and no doubt largely accounted for his diarrhea, weight loss and cachexia. It is easy to see how stool stains are positive for acid fast bacteria.

Grossly the lungs were solid and did not deflate when cut. This is because the alveoli were filled with the frothy eosinophilic material which is typical of PCP as discussed by Dr. Smith. Silver stains revealed extensive *Pneumocystis carinii* infection in all lobes of both lungs.

There were grossly visible ulcers in the right lower and upper lobe bronchi which microscopically demonstrated aspergillus organisms. This infection was significant but minor compared to the PCP.

The colon, in addition to the mycobacterial infection which was grossly invisible, demonstrated multiple nodules with an irregular, shallowly ulcerated surface. These ulcers were not typical of amebiasis, and no amoebae were seen microscopically. Instead, the nodules were seen microscopically to represent localized, marked, submucosal edema with cystic transformation and invasion with non acid-fast staining bacteria. We interpreted this to be secondary invasion of the bowel wall by fecal organisms. We have never previously identified an infection of this type. There was no evidence in the bowel of cryptosporidiosis or KS.

As noted by Dr. Smith, CMV grew from the open lung biopsy tissue. At autopsy, CMV could be morphologically demonstrated only in the adrenal

glands. This is of particular interest, since recent data suggest that CMV has a propensity to cause adrenalitis in AIDS but not in normal patients. This infection may be associated with clinical Addison's disease.[15]

A physician: Is the T helper: T suppressor (T_h/T_s) ratio of lymphocytes useful in making the diagnosis of AIDS?

Dr. White: No, it really is not. The CDC uses clinical criteria to make the diagnosis. Although T_h/T_s is decreased in AIDS patients, it's actually a remarkable decrease in the number of helper cells more than a change in the ratio T_h/T_s which characterizes AIDS. Decreases in the ratio of T_h/T_s are not specific for AIDS. CMV infections and disseminated histoplasmosis, among other illnesses, decrease the ratio but the patients many times don't have AIDS.

A physician: How accurate are the assays currently in use to screen blood donors for antibody to HTLV-III?

Dr. White: An enzyme-linked immunosorbent assay (ELISA) is in use to screen blood donors. The ELISA appears to have good sensitivity, but its specificity is such that 1-2% of the normal uninfected population will have false-positive tests. This has, understandably, led to a great amount of concern about how to implement the results of the test. Western blot analysis can be used to confirm infection with HTLV-III and has excellent specificity but diminished sensitivity compared to ELISA. It appears that the ELISA will be an effective tool for screening blood donors. However, in light of the implications of infection with HTLV-III, it's not clear how to advise an individual outside the usual risk groups with a positive ELISA.

REFERENCES

1. Gallo RC, Salahuddin SZ, Popovic M, *et al:* Frequent detection and isolation of cytopathic retroviruses (HTLV-III) from patients with AIDS and at risk for AIDS. *Science*, 224:500-503, 1984.
2. Broder S, Bunn PA, Jaffe ES, *et al:* T-cell lymphoproliferative syndrome associated with human T-cell leukemia/lymphoma virus. *Ann Int Med*, 100:543-557, 1984.
3. Kalyanaraman VS, Sarngadharan MG, Robert-Guroff M, *et al:* A new subtype of human T-cell leukemia virus (HTLV-II) associated with a T-cell variant of hairy cell leukemia. *Science*, 218:571-573, 1982.
4. CDC: Antibodies to a retrovirus etiologically associated with acquired immunodeficiency syndrome (AIDS) in populations with increased incidences of the syndrome. *MMWR*, 33:377-379, 1984.
5. Melbye M, Biggar R, Ebbesen P, *et al:* Seroepidemiology of HTLV-III antibody in Danish homosexual men: prevalence, transmission and disease outcome. *Br Med J*, 289:573-575, 1984.
6. Ognibene FP, Steis RG, Macher AM: Kaposi's sarcoma causing pulmonary infiltrates and respiratory failure in the acquired immunodeficiency syndrome. *Ann Int Med*, 102:471-475, 1985.
7. Gordin FM, Simon GL, Wofsy CB, *et al:* Adverse reactions to trimethoprim-sulfa in patients with acquired immunodeficiency syndrome. *Ann Int Med*, 100:495-499, 1984.
8. Shelhamer JH, Ognibene FP, Macher AM, *et al:* Persistence of *Pneumocystis carinii* in lung tissue of acquired immunodeficiency syndrome patients treated for pneumocystis pneumonia. *Am Rev Respir Dis*, 130:1161-1165, 1984.
9. Macher AM, Kovacs JA, Gill JV, *et al:* Bacteremia due to *Mycobacterium avium-intracellulare* in the acquired immunodeficiency syndrome. *Ann Int Med*, 99:782-785, 1983.
10. Knight V: Respiratory Viruses. *In* Harrison's: Principles of Internal Medicine. Petersdorf, Adams, Braunwald, Isselbacher, Martin, Wilson (Ed.), New York, 1983.
11. Frager JD, Brandt LJ, Klein R, *et al:* Candida esophagitis in the Acquired Immunodeficiency Syndrome. *Gastro*, 88:1387, 1985.
12. Tauitian A, RauFran JP, Rosenthal LE, *et al:* Ketoconazole-resistant candida esophagitis in patients with AIDS. *Gastro*, 88:1611, 1985.
13. Wheat LS, Slama TG, Zeckel ML: Histoplasmosis in the Acquired Immune Deficiency Syndrome. *Am J Med*, 78:203-210, 1985.
14. Ognibene FP, Shelhamer J, Gill V, *et al:* The diagnosis of *Pneumocystis carinii* pneumonia in patients with acquired immunodeficiency syndrome using subsegmental bronchoalveolar lavage. *Am Rev Respr Dis*, 129:929-932, 1984.
15. Tapper ML, Rotterdam HZ, Lerner CW, *et al:* Adrenal necrosis in the acquired immunodeficiency syndrome. *Ann Int Med*, 100:239-241, 1984.

BALANCED CALCIUM CHANNEL BLOCKADE!



Low incidence of side effects
CARDIZEM® (diltiazem HCl) produces an incidence of adverse reactions not greater than that reported with placebo therapy, thus contributing to the patient's sense of well-being.

*Cardizem is indicated in the treatment of angina pectoris due to coronary artery spasm and in the management of chronic stable angina (classic effort-associated angina) in patients who cannot tolerate therapy with beta-blockers and/or nitrates or who remain symptomatic despite adequate doses of these agents.

References:
1. Strauss WE, McIntyre KM, Parisi AF, et al: Safety and efficacy of diltiazem hydrochloride for the treatment of stable angina pectoris: Report of a cooperative clinical trial. Am J Cardiol 49:560-566, 1982.
2. Pool PE, Seagren SC, Bonanno JA, et al: The treatment of exercise-inducible chronic stable angina with diltiazem: Effect on treadmill exercise. Chest 78 (July suppl):234-238, 1980.

Reduces angina attack frequency*
42% to 46% decrease reported in multicenter study.[1]

Increases exercise tolerance*
In Bruce exercise test,[2] control patients averaged 8.0 minutes to onset of pain; Cardizem patients averaged 9.8 minutes ($P<.005$).

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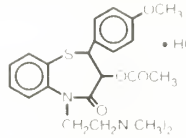
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PROFESSIONAL USE INFORMATION

cardizem®
(diltiazem HCl)
30 mg and 60 mg tablets

DESCRIPTION

CARDIZEM® (diltiazem hydrochloride) is a calcium ion influx inhibitor (slow channel blocker or calcium antagonist). Chemically diltiazem hydrochloride is 1,5-Benzothiazepin-4(5H)one,3-(acetyloxy) -5-[2-(dimethylamino)ethyl]-2,3-dihydro-2-(4-methoxyphenyl)-, monohydrochloride,(+) -cis- The chemical structure is



Diltiazem hydrochloride is a white to off-white crystalline powder with a bitter taste. It is soluble in water, methanol, and chloroform. It has a molecular weight of 450.98. Each tablet of CARDIZEM contains either 30 mg or 60 mg diltiazem hydrochloride for oral administration.

CLINICAL PHARMACOLOGY

The therapeutic benefits achieved with CARDIZEM are believed to be related to its ability to inhibit the influx of calcium ions during membrane depolarization of cardiac and vascular smooth muscle.

Mechanisms of Action. Although precise mechanisms of its antianginal actions are still being delineated, CARDIZEM is believed to act in the following ways:

1. Angina Due to Coronary Artery Spasm. CARDIZEM has been shown to be a potent dilator of coronary arteries both epicardial and subendocardial. Spontaneous and ergonovine-induced coronary artery spasm are inhibited by CARDIZEM.
2. Exertional Angina. CARDIZEM has been shown to produce increases in exercise tolerance, probably due to its ability to reduce myocardial oxygen demand. This is accomplished via reductions in heart rate and systemic blood pressure at submaximal and maximal exercise work loads.

In animal models, diltiazem interferes with the slow inward (depolarizing) current in excitable tissue. It causes excitation-contraction uncoupling in various myocardial tissues without changes in the configuration of the action potential. Diltiazem produces relaxation of coronary vascular smooth muscle and dilation of both large and small coronary arteries at drug levels which cause little or no negative inotropic effect. The resultant increases in coronary blood flow (epicardial and subendocardial) occur in ischemic and nonischemic models and are accompanied by dose-dependent decreases in systemic blood pressure and decreases in peripheral resistance.

Hemodynamic and Electrophysiologic Effects. Like other calcium antagonists, diltiazem decreases sinoatrial and atrioventricular conduction in isolated tissues and has a negative inotropic effect in isolated preparations. In the intact animal, prolongation of the AH interval can be seen at higher doses.

In man, diltiazem prevents spontaneous and ergonovine-provoked coronary artery spasm. It causes a decrease in peripheral vascular resistance and a modest fall in blood pressure and, in exercise tolerance studies in patients with ischemic heart disease, reduces the heart rate-blood pressure product for any given work load. Studies to date, primarily in patients with good ventricular function, have not revealed evidence of a negative inotropic effect, cardiac output, ejection fraction, and left ventricular end diastolic pressure have not been affected. There are as yet few data on the interaction of diltiazem and beta-blockers. Resting heart rate is usually unchanged or slightly reduced by diltiazem.

Intravenous diltiazem in doses of 20 mg prolongs AH conduction time and AV node functional and effective refractory periods approximately 20%. In a study involving single oral doses of 300 mg of CARDIZEM in six normal volunteers, the average maximum PR prolongation was 14% with no instances of greater than first-degree AV block. Diltiazem-associated prolongation of the AH interval is not more pronounced in patients with first-degree heart block. In patients with sick sinus syndrome, diltiazem significantly prolongs sinus cycle length (up to 50% in some cases).

Chronic oral administration of CARDIZEM in doses of up to 240 mg/day has resulted in small increases in PR interval, but has not usually produced abnormal prolongation. There were, however, three instances of second-degree AV block and one instance of third-degree AV block in a group of 959 chronically treated patients.

Pharmacokinetics and Metabolism. Diltiazem is absorbed from the tablet formulation to about 80% of a reference capsule and is subject to an extensive first-pass effect, giving an absolute bioavailability (compared to intravenous dosing) of about 40%. CARDIZEM undergoes extensive hepatic metabolism in which 2% to 4% of the unchanged drug appears in the urine. In vitro binding studies show CARDIZEM is 70% to 80% bound to plasma proteins. Competitive ligand binding studies have also shown CARDIZEM binding is not altered by therapeutic concentrations of digoxin, hydrochlorothiazide, phenylbutazone, propranolol, salicylic acid, or warfarin. Single oral doses of 30 to 120 mg of CARDIZEM result in detectable plasma levels within 30 to 60 minutes and peak plasma levels two to three hours after drug administration. The plasma elimination half-life following single or multiple drug administration is approximately 3.5 hours. Desacetyl diltiazem is also present in the plasma at levels of 10% to 20% of the parent drug and is 25% to 50% as potent a coronary vasodilator as diltiazem. Therapeutic blood levels of CARDIZEM appear to be in the range of 50 to 200 ng/ml. There is a departure from dose-linearity when single doses above 60 mg are given, a 120-mg dose gave blood levels three times that of the 60-mg dose. There is no information about the effect of renal or hepatic impairment on excretion or metabolism of diltiazem.

INDICATIONS AND USAGE

1. **Angina Pectoris Due to Coronary Artery Spasm.** CARDIZEM is indicated in the treatment of angina pectoris due to coronary artery spasm. CARDIZEM has been shown effective in the treatment of spontaneous coronary artery spasm presenting as Prinzmetal's variant angina (resting angina with ST-segment elevation occurring during attacks).
2. **Chronic Stable Angina (Classic Effort-Associated Angina).** CARDIZEM is indicated in the management of chronic stable angina. CARDIZEM has been effective in controlled trials in reducing angina frequency and increasing exercise tolerance.

There are no controlled studies of the effectiveness of the concomitant use of diltiazem and beta-blockers or of the safety of this combination in patients with impaired ventricular function or conduction abnormalities.

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. **Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
2. **Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt). Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. **Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
4. **Acute Hepatic Injury.** In rare instances, patients receiving CARDIZEM have exhibited reversible acute hepatic injury as evidenced by moderate to extreme elevations of liver enzymes. (See PRECAUTIONS and ADVERSE REACTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes, however, these changes were reversible with continued dosing.

Drug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women, therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, exercise caution when CARDIZEM is administered to a nursing woman if the drug's benefits are thought to outweigh its potential risks in this situation.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences, as well as their frequency of presentation, are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%), AV block (1.1%). In addition, the following events were reported infrequently (less than 1%) with the order of presentation corresponding to the relative frequency of occurrence:

Cardiovascular	Flushing, arrhythmia, hypotension, bradycardia, palpitations, congestive heart failure, syncope.
Nervous System	Paresthesia, nervousness, somnolence, tremor, insomnia, hallucinations, and amnesia.
Gastrointestinal	Constipation, dyspepsia, diarrhea, vomiting, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH.
Dermatologic:	Pruritus, petechiae, urticaria, photosensitivity.
Other	Polyuria, nocturia.

The following additional experiences have been noted:

A patient with Prinzmetal's angina experiencing episodes of vasospastic angina developed periods of transient asymptomatic asystole approximately five hours after receiving a single 60-mg dose of CARDIZEM.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: erythema multiforme; leukopenia; and extreme elevations of alkaline phosphatase, SGOT, SGPT, LDH, and CPK. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

OVERDOSAGE OR EXAGGERATED RESPONSE

Overdosage experience with oral diltiazem has been limited. Single oral doses of 300 mg of CARDIZEM have been well tolerated by healthy volunteers. In the event of overdosage or exaggerated response, appropriate supportive measures should be employed in addition to gastric lavage. The following measures may be considered:

Bradycardia	Administer atropine (0.60 to 1.0 mg). If there is no response to vagal blockade, administer isoproterenol cautiously.
High-Degree AV Block	Treat as for bradycardia above. Fixed high-degree AV block should be treated with cardiac pacing.
Cardiac Failure	Administer inotropic agents (isoproterenol, dopamine, or dobutamine) and diuretics.
Hypotension	Vasopressors (eg, dopamine or levarterenol bitartrate).

Actual treatment and dosage should depend on the severity of the clinical situation and the judgment and experience of the treating physician.

The oral/LD_{50}'s in mice and rats range from 415 to 740 mg/kg and from 560 to 810 mg/kg, respectively. The intravenous LD_{50}'s in these species were 60 and 38 mg/kg, respectively. The oral LD_{50} in dogs is considered to be in excess of 50 mg/kg, while lethality was seen in monkeys at 360 mg/kg. The toxic dose in man is not known, but blood levels in excess of 800 ng/ml have not been associated with toxicity.

DOSAGE AND ADMINISTRATION

Exertional Angina Pectoris Due to Atherosclerotic Coronary Artery Disease or Angina Pectoris at Rest Due to Coronary Artery Spasm. Dosage must be adjusted to each patient's needs. Starting with 30 mg four times daily, before meals and at bedtime, dosage should be increased gradually (given in divided doses three or four times daily) at one- to two-day intervals until optimum response is obtained. Although individual patients may respond to any dosage level, the average optimum dosage range appears to be 180 to 240 mg/day. There are no available data concerning dosage requirements in patients with impaired renal or hepatic function. If the drug must be used in such patients, titration should be carried out with particular caution.

Concomitant Use With Other Antianginal Agents:

1. **Sublingual NTG** may be taken as required to abort acute anginal attacks during CARDIZEM therapy.
2. **Prophylactic Nitrate Therapy**—CARDIZEM may be safely coadministered with short- and long-acting nitrates, but there have been no controlled studies to evaluate the antianginal effectiveness of this combination.
3. **Beta-blockers.** (See WARNINGS and PRECAUTIONS.)

HOW SUPPLIED

Cardizem 30-mg tablets are supplied in bottles of 100 (NDC 0088-1771-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1771-49). Each green tablet is engraved with MARION on one side and 1771 engraved on the other. CARDIZEM 60-mg scored tablets are supplied in bottles of 100 (NOC 0088-1772-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1772-49). Each yellow tablet is engraved with MARION on one side and 1772 on the other.

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Advances in Non-Pharmacologic Treatment of Hypertension: A New Approach to the Problem of Effective Dietary Sodium Restriction

1. Sodium in the Diet: Patient Compliance

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MYRON H. WEINBERGER, M.D.
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Indianapolis

SODIUM, AN ABUNDANT element in our food supply, has received considerable attention in the past few years. Sodium acts as a fluid carrier and is, therefore, intimately related to the regulation of body fluids. Sodium-restricted diets are indicated for disease states where fluid handling is impaired (i.e., congestive heart failure, hypertension, renal failure) and, consequently, are part of the medical regimen for many patients.

Current estimates indicate that most Americans consume approximately 1,776 mg sodium per 1,000 Kcal[1] with the average daily intake falling into the 3,105 to 4,600 mg sodium range.[2] The actual biological need for sodium is minuscule. Although a daily intake of 1,100 to 3,300 mg sodium has been labeled "safe and adequate" for adults by the Food and Nutrition Board of National Academy of Sciences,[3] a need for 250 mg or less has been demonstrated in some population studies.[4]

Many health-related organizations have recommended a reduction in sodium consumption for the general public, both healthy and otherwise.[5-8] These recommendations have been made because of recently identified individual variations in the ability to handle sodium and water which may predispose some individuals to specific disease states.[9] For example, it is estimated that 20% of the population may be at risk for development of hypertension. Although it is not presently possible to determine who will develop hypertension, it is hypothesized that decreasing sodium intake may protect against the onset or delay the progression of this disease. While even mild hypertension is acknowledged to be a major factor for cardiovascular morbidity and mortality, recent studies have raised questions about the value of pharmacologic therapy in everyone with a persistent diastolic pressure greater than 90 mm Hg.[10] These studies have suggested that the benefit of blood pressure reduction in mild hypertension may be, at least in part, offset by side effects and metabolic changes engendered by certain antihypertensives.[10] As examples, the use of diuretic therapy, by provoking mild hypokalemia, may increase the risk for sudden cardiac death from arrhythmia. Diuretics also raise uric acid, increasing this recently identified coronary artery disease risk factor as well as provoking gout in a small number of susceptible individuals. Diuretics also raise blood sugar by several mechanisms. Both diuretics and beta blockers raise cholesterol and LDL levels while lowering HDL, thus adversely affecting the atherogenic ratio.[10] All of these concerns have prompted a renewal of interest in non-pharmacologic approaches to blood pressure reduction.

One non-pharmacologic approach, reduction of dietary sodium intake, has a substantial and impressive history in blood pressure control. Before the advent of diuretic therapy, the "Rice Diet" was successfully used to treat malignant hypertension. This diet was protein and sodium deficient and rich in potassium. The use of diuretics led

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These studies were supported, in part, by grants from the USPHS, HL 27398 and HL 30561.

Acknowledgments: The authors wish to acknowledge the contributions of our colleagues, Sandra Daugherty, M.D., Ph.D., Ann Bolka Kelterhouse, R.D., Lori Miller, R.D., Cathy Lang, R.D., Karen Poenisch, R.D., Teresa Gilbert, R.D., and Susan Williams, R.D. in the implementation of the studies. Ms. Uma Richmond provided secretarial assistance in the preparation of this manuscript.

to a de-emphasis on reduction of sodium intake for the treatment of hypertension, congestive heart failure and related disorders. The major reason for this was the difficulty in convincing patients that a lower sodium diet was better for them, that it was not more expensive, unnecessarily time-consuming, inconvenient or important. These reservations have remained in the minds of many physicians. Today, however, it is much easier to achieve a modest level of dietary sodium restriction without sacrificing individual food preferences, variety or the luxury and convenience of "eating out."

Abundant evidence has been obtained to demonstrate that reduction of dietary sodium intake from the average American intake of 150-200 mEq/d (3-4g sodium or 8-10g salt) to 70-80 mEq/d (1.5-2.0/d) will lower blood pressure. Among hypertensives a greater blood pressure fall is generally seen. When this modest degree of sodium restriction is achieved, it is often possible to reduce or even eliminate medications needed to control blood pressure, particularly diuretics and vasodilators. In addition, salt restriction enhances diuretic efficacy, frequently enabling a lower dose to be used, thus minimizing diuretic-related side effects. In particular, salt restriction reduces diuretic-induced hypokalemia. In addition to decreasing the risk of cardiac arrhythmia this recently has been shown to have a blood-pressure lowering effect of its own. As subsequently described, we have experienced considerable success in the management of hypertension using sodium restriction as an integral part of the treatment regimen.

Patient Compliance

A medical therapy that has proven efficacious for controlling blood pressure in a research setting may not be effective for general use unless patients are willing to comply with it as prescribed. Based on the large number of investigations during the last decade, several factors have emerged which are predictive of the extent to which a patient will comply with a therapeutic regimen.[11,12] These factors can be classified into three categories: 1) characteristics of the therapy, 2) characteristics of the patient, and 3) the nature of the patient-clinician interaction.

Patient compliance depends, in part, upon the demands and consequences of the therapeutic regimen. In general, adding something to one's everyday routine (e.g., taking pills) is usually easier to accomplish than changing an established pattern such as dietary habits. The greater the behavioral change required by the regimen, the less compliance there will be. Thus, the greater the number of treatments prescribed, the less compliance there will be with any of them.[13] The longer one has to comply with a therapeutic regimen, the greater the incidence of noncompliance. Thus, a regimen for a chronic disease such as hypertension is more difficult to comply with than is a regimen for an acute illness. Consequently, fewer than half of the hypertensives who begin treatment remain in care after one year.[14] Some studies have shown that as few as 20% of known hypertensives have their blood pressures well controlled.[14]

The degree to which a patient will comply with an antihypertensive regimen will be determined by characteristics of the patient. Surprisingly, the factors which are often thought to be important but are rarely predictive of compliance are such characteristics as the patient's age, race, sex, income and educational background. Of greater importance appear to be patients' health beliefs and their system of support, which fosters or thwarts compliance.

Patients are unlikely to follow a therapeutic regimen unless they believe that the benefits of the treatment outweigh its adverse effects. Many patients believe that taking medicine should make them feel better. Since hypertension is an asymptomatic illness, the patient does not obtain symptom relief from the medication. Many patients may stop taking their antihypertensive medication because they don't feel better after taking their medicine nor do they feel worse when they stop. Another belief which can affect compliance is that taking medication cures, not just controls, hypertension. Results of the Maryland High Blood Pressure Household Survey found that many patients believed that they should stop taking their antihypertensive medication when it ran out.[15]

Another factor that can affect patient compliance is the degree of support they receive from their family doctor and friends for following the therapeutic regimen.[16,17] Asking a patient to make a major dietary modification is unlikely to succeed unless the primary food preparer in the household understands what needs to be done and agrees to cooperate. Thus, the extent to which the therapeutic regimen required of the patient impinges on the daily routines of other members of his or her social network will determine the degree to which the patient complies with the regimen.

Other forms of support that can foster compliance are the use of reminder and feedback systems. Office systems for recalling patients who miss appointments have significantly increased the number of patients who remain in care.[18] In the Maryland High Blood Pressure Survey, approximately 40% of hypertensive patients indicated that they were not scheduled for a follow-up visit within six months after receiving a prescription for antihypertension medication.[15] Scheduling patients' next appointment prior to leaving the office, along with a system to remind them prior to this appointment, can increase patients' appointment keeping. Another support system shown to enhance therapeutic compliance is the home use of blood pressure monitoring. Increased monitoring of blood pressure, either by providers or by patients, provides feedback that helps patients keep from

deviating from their prescribed regimens.[19-22]

The final factor that appears to influence compliance is the nature of the clinician-patient interaction. In general, compliance is enhanced when patients are most active in decisions about their care[23-25] and when the clinician is viewed as friendly and approachable.[26,27]

From the above discussion, it should be evident that problems of noncompliance with antihypertensive regimens have multiple causes. Consequently, there is no simple, effective strategy that can be used to guarantee that patients will comply with a given therapeutic regimen. During the last decade we have greatly increased our understanding of the complexity of the problems involved in patient noncompliance and expanded our strategies available for managing them. However, as new therapies for treating hypertension evolve, new problems will arise. Thus, we must continue to investigate methods to help clinicians and their patients achieve and sustain optimal blood pressure control.

Modest dietary sodium restriction can be effective as an adjunct to antihypertensive therapy, often minimizing the side effects or amounts of drugs required to control blood pressure. It can occasionally eliminate the need for medication in the treatment of hypertension. Achieving compliance with a reduced sodium intake has often been difficult for patients to accomplish.

REFERENCES

1. Fregley MS, Fregley MJ: The estimates of sodium intake in man. In Fregley MJ and Kare MR, eds: *The Role of Salt in Cardiovascular Hypertension*, New York: Academic Press, Inc., 1982.
2. Tobian L: Dietary salt (sodium) and hypertension. *Am J Clin Nutr*, 32:2659 and 2739, 1979.
3. Food and Nutrition Board: *Recommended Dietary Allowances*. 9th rev. ed, 1980. Washington, DC: National Academy of Sciences, 1980.
4. Oliver WJ, Cohen EL, Neel JV: Blood pressure, sodium intake and sodium related hormones in the Yanomamo Indians, a "no-salt" culture. *Circulation*, 2:146, 1975.
5. Council on Scientific Affairs of AMA: American Medical Association concepts of nutrition and health. *JAMA*, 242:2335, 1979.
6. Food and Nutrition Board: *Toward Healthful Diets*. Washington, DC: National Academy of Sciences, 1980.
7. American Dietetic Association: Commentary on dietary goals for the United States, 2nd ed, *J Am Diet Assoc*, 74:529, 1979.
8. Hypertension Task Force of National Heart, Lung, and Blood Institute: Current research and recommendations from the Task Force Subgroups on Renin-Angiotensin-Aldosterone, and Salt and Water. DHEW Pub. No. (NIH) 79-1630, 1979.
9. Freis ED: Salt, volume and the prevention of hypertension. *Circulation*, 53:589, 1976.
10. Weinberger MH: Antihypertensive therapy and lipids. *Arch Int Med*, 145:1102-1105, 1985.
11. Haynes RB: A critical view of the "determinants" of patient compliance with therapeutic regimens. In *Compliance with Therapeutic Regimens*, edited by Sackett DL, Haynes RB. Baltimore: John Hopkins Press, 1976.
12. Sackett DL: Future applications and hypotheses from old research. In *New Directions in Patient Compliance*, edited by Cohen SJ. Lexington Books 1979, 33.
13. Haynes RB: Determinants of patient compliance: The disease and the mechanics of treatment. In *Compliance in Health Care*, edited by Haynes RB, Taylor DW, Sackett DL. Baltimore: Johns Hopkins University Press, 1979.
14. NHLBI Working Group: Management of patient compliance in the treatment of hypertension. *Hypertension*, 4:415, 1982.
15. Bane LR, Levine DM, Parry RE, *et al.* Update on factors associated with high blood pressure compliance. *Md State Med J*, 33:201-204, 1984.
16. Caplan RD: Patient, provider, and organization: Hypothesized determinants of adherence. In *New Directions in Patient Compliance*, edited by Cohen SJ. Lexington, MA, Lexington Books 1979.
17. Asher CC: The impact of social support networks on adult health. *Med Care*, 22:349, 1984.
18. Haynes RB: Strategies to improve compliance with referrals, appointments and prescribed medical regimen. In *Compliance with Therapeutic Regimens*, edited by Sackett DL, Haynes RB. Baltimore: Johns Hopkins University Press, 1979.
19. McKenney JM, Slining JM, Henderson HR, Devins D, Barr M: The effect of clinical pharmacy services on patients with essential hypertension. *Circulation*, 48:1104, 1973.
20. Takala J, Niemela N, Rosti J, Sivers K: Improving compliance with therapeutic regimens in hypertensive patients in a community health center. *Circulation*, 59:540, 1979.
21. Haynes RB, Sackett DL, Gibson ES, Taylor DW, Hackett BC, Roberts RS, Johnson AL: Improvement of medication compliance in uncontrolled hypertension. *Lancet*, 1:1265, 1976.
22. Nessman DG, Carnahan JE, Nugent CA: Improving compliance. Patient-operated hypertension groups. *Arch Intern Med*, 140:1427, 1980.
23. Barofsky I: Compliance, adherence and the therapeutic alliance: Steps in the development of self-care. *Soc Sci Med*, 12:369, 1978.
24. Shulman B: Active patient orientation and outcomes in hypertensive treatment. *Med Care*, 17:257, 1979.
25. Kaplan SH, Greenfield S, Ware JE: Changing health outcomes via patient participation in care. Presented at the 112th Annual Conference of the American Public Health Association, 1983.
26. Freemon B, Negrete V, Davis M, Korsch B: Gaps in doctor-patient communications: Doctor-patient interaction analysis. *Pediatr Res*, 5:298, 1971.
27. Svarstad B: Physician-patient communication and patient conformity with the medical advice. In *The Growth of Bureaucratic Medicine*, edited by Mechanic D. New York: Wiley, 1976.

The Feelings of a Patient

A Cancer Patient's View of the Doctor-Patient Relationship

DOROTHY HUBBARD, Ph.D.
Indianapolis

HOW DO PATIENTS FEEL about their treatment by doctors? As one patient with metastatic breast cancer, I hope that sharing my feelings on the management of my case will benefit other patients.

To me, being treated as a whole person, with a mind as well as a body, is most important. Those doctors who have dealt with me as if I had a mind capable of understanding something about my disease and a desire to know my diagnosis and plan for treatment have been a tremendous help to me, and I am very grateful for this respect. Those who have dealt with me as if I were merely a body to be treated have frustrated me greatly and aggravated my condition. Those who have given me incorrect information have caused me agony.

When my primary malignancy was detected by surgical biopsy, my surgeon told me the diagnosis, frankly and honestly. He recommended a Halsted radical mastectomy, since the cancer was located on the muscle, and he believed that the only satisfactory operation would be one which would remove the primary malignancy and all accessible lymph nodes in its drainage tract. I believe this thorough removal of tissue was preferable to less aggressive procedures. Short cuts may well cut short life. The loss of a breast is insignificant compared with the loss of a life.

Postoperatively, I had chemotherapy with Adriamycin and Cytoxan, and I believe this was an advisable precaution, because three lymph nodes had metastases. I experienced no nausea or sickness from this treatment.

As another prophylactic measure, my husband and I requested my surgeon to remove the other breast, because the pathology examination of the specimen from the first mastectomy revealed that some areas other than the malignant nodule were atypically hyperplastic, with the possibility of becoming malignant. When the second breast was removed, similar hyperplastic areas were found in it. I believe this second mastectomy was a good precaution which should be more widely used.

In the follow-up for recurrence, I learned the hard way that our present techniques can not always detect cancer. My bone scans showed hot spots in several ribs and, since these did not increase in size but disappeared and new ones appeared in successive years, metastases could not be distinguished from rib fractures. Nor did my x-rays or CT scans detect the metastases which we later learned had been present.

Better techniques for detection of cancer are needed, not only in bone but particularly in soft tissue.

One detection technique which has been available for a long time, and which should be more widely practiced, is the biopsy. A tragic mistake in my case was the failure of my chemotherapists to order a biopsy on a superficial tumor which appeared on my chest wall four years after the primary malignancy. For the next year I showed them this persistent swelling, which was located in a readily accessible place, in an intercostal space, in the drainage path of the primary malignancy. My bone scans, rib x-rays, and chest x-rays were negative at this time, because the bone was not yet involved. When I showed this tumor to other doctors (my family practitioner, my orthopedist, my gynecologist, and my husband) they all referred me back to my chemotherapists, who told me they didn't know what it was but they knew it wasn't cancer.

After one year, I showed this tumor to my surgeon. He immediately performed a surgical biopsy, which revealed duct cell carcinoma of the breast, which had metastasized into the internal mammary lymph node in the drainage path of the primary malignancy, and by this time into the adjoining rib and intercostal tissue, and into a second internal mammary lymph node.

Earlier diagnosis might have prevented the extensive regional growth and the recently detected remote metastases into the spine and rib of the opposite side, if radiation and/or chemotherapy had been started months earlier. I hope doctors will remember what they are taught: When a suspicious, persistent tumor is detected, a biopsy should be ordered. It was a mistake not to order a biopsy, and I hope this won't happen to other patients.

One of my greatest frustrations has been the lack of communication with one of these chemotherapists, because he took the attitude that he tells me; I don't tell him anything. He made me feel that he was only treating my body,

not me. He didn't seem to care that there was a mind attached to that body, a mind that wanted to know what was going on. He spent only a few minutes with me, and I felt he belittled me for wanting to find out the cause of the tumor on my chest wall. While the growing cancer was damaging me physically, his attitude was damaging me emotionally.

At that time I had radiation therapy of the involved lymph nodes, followed by chemotherapy with 5-fluorouracil and vinblastine. Two and a half years later a second recurrence was detected by bone scan and CT scan, involving a remote rib and vertebral body. I have completed this second round of radiation therapy, and I am now having a third round of chemotherapy, using mitomycin and vinblastine.

I have experienced no sickness from any of my radiation or chemotherapy, except for scarring of the veins. I believe the benefits of these treatments outweigh the side effects. I wonder if my active exercise program of swimming a half mile or bicycling 10 to 30 miles almost every day has lessened the malaise.

Both my current radiation oncologist and my chemotherapist have been very considerate of me. They have managed my treatment well, and they have been very patient in answering my questions. They have explained to me my diagnostic tests and plan of therapy, and this has been extremely helpful to me.

Also my family practitioner has been very helpful. He has generously given of his time in consulting with my specialists, in talking with me, and in taking care of my general health. I find having a family practitioner is very beneficial. A patient can get lost between the specialists.

My Doctors Treated My Mind Wisely When They Kept Me Informed, Cared about My Feelings and Treated Me as a Whole Person. . .

Throughout this whole ordeal, being told what is known and what is not known about my cancer has helped me to deal with it. I am grateful that my doctors told me the truth both when the primary and when the metastatic malignancies were discovered. Perhaps there are those who prefer not to know when they have cancer, but certainly there are some of us who want to know. I can handle knowing the truth about my disease. I can not tolerate not knowing. Since it is my body, I feel it is only fair that I know what can be known.

I believe a doctor should tell a patient, or a responsible member of the family, should death be imminent. To deny that family the time to plan and prepare for death and dying is cruel. I am grateful that my first chemotherapist told me that, if the cancer did recur, I would probably die from it. I am grateful that none of my doctors have told me when I would die. No one can tell. I know that I may go in a few months, or I may last many years.

My accentuated awareness that I, just like everyone else, have a finite, but unknown, length of time to live, has not depressed or discouraged me. Rather, it has made me appreciate, even more, each day of life that I now have. It has inspired me to try to live each of these days to the fullest. I have no time for negative thinking. Living time is too precious to waste.

In summary, I feel that my doctors treated my body wisely when they carried out the most precautious procedures for managing the cancer (the Halsted radical mastectomy, the prophylactic mastectomy of the breast with hyperplastic areas, the chemotherapy, and the radiation). I feel that my doctors treated my mind wisely when they kept me informed, when they cared about my feelings, and when they treated me as a whole person. I feel my doctors made a mistake when they did not order a biopsy on a suspicious, persistent tumor.

I hope these thoughts will help to perpetuate the appropriate procedures which were done in my case, to prevent the mistakes which were made, and to improve treatment for other patients.

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An Open Letter to Physicians Interested in Improving Pre-Hospital (Ambulance) Patient Care

W. RAY LYNCH JR., M.D.
Anderson

AS CHAIRMAN OF THE EMS committee of the American College of Emergency Physicians (ACEP) – Indiana Chapter, I am writing to request help from other Indiana physicians in improving pre-hospital (ambulance) patient care.

Pre-hospital care is an integral part of our speciality. In 1979, the American Board of Medical Specialists recognized Emergency Medicine as a separate speciality, and since 1980, the American Board of Emergency Medicine has administered an exam to certify physicians as specialists in Emergency Medicine. This new speciality has three areas of interest: Resuscitology, Traumatology, and Toxicology. All of these areas require a close working relationship with pre-hospital care providers. ACEP is working closely with the state EMS commission to develop medical directors for Basic Life Support (BLS) pre-hospital care providers (EMTs).

Since May 1974, the state EMS commission has set the standards for certification of BLS ambulance providers. There are over 12,000 state certified Emergency Medical Technicians and over 350 certified BLS providers operating over 850 ambulances in the state. In 1975, the commission set standards for certification of Advanced Life Support (ALS) intermediate and paramedic level providers. There are currently over 700 certified paramedics and over 70 certified ALS providers in the state. The EMS commission has established three levels of EMS personnel: Basic EMT, Advanced EMT, and Paramedic.

The **Basic EMT** is required to complete Department of Transportation (DOT) 100 hours didactic and 10 hours clinical training course. Skills which are taught include patient assessment, administration of oxygen, use of Bag-Valve Mask, application of Anti-shock Trousers, CPR, splinting and bandaging, immobilization, extrication, and transportation. After initial certification, the EMT is required to be recertified every three years. During the first and second years, 20 hours of in-service training are required each year. A commission-approved Refresher Training Course is required in the third year.

The **Advanced EMT** is required to complete the Basic EMT course plus the first three modules of the 15 module DOT Paramedic course. This includes 30 hours didactic, 30 hours clinical, and 20 hours field preceptorship. Skills which are taught include establishing IV line and administering fluids in addition to Basic EMT skills. The recertification requirements are the same as for Basic EMT plus 10 hours ALS continuing education per year (two hours clinical, four hours Audit and Review and four hours of ALS lectures). The Advanced EMT must function under the control of a medical director with protocol and standing orders and/or medical direction from radio communications.

The **Paramedic** is required to complete the DOT 15 module Paramedic course which includes 450 hours didactic, 300 hours clinical, and 200 hours field preceptorship. Skills which are taught include advanced airway management (esophageal obturator airway and endotracheal intubation), cardiac monitoring and defibrillation, and administration of medications. The recertification requirements are 60 hours of continuing education approved by sponsoring hospital and medical director per year. The Paramedic must function under the control of a medical director with protocol and standing orders and/or medical direction from radio communications.

Currently, ACEP is promoting medical directors for the BLS providers by sponsoring a recognition program called "Striving for Excellence." "Striving for Excellence" is designed to recognize BLS providers who voluntarily use physician input for pre-hospital care guidelines (protocols) and monthly audit and review of run reports. These BLS providers are awarded a recognition certificate from ACEP during the state EMS conference.

If you are interested in working with a BLS provider as medical director, then the EMS committee of ACEP can work with you in many ways. The EMS committee has developed detailed pre-

Dr. Lynch is Chairman of the Emergency Medical Services Committee of the Indiana Chapter, American College of Emergency Physicians.

Corresondence: 914 S. Range Line Road, Carmel, Ind. 46032.

hospital care guidelines for the EMT. These guidelines have been mailed to BLS providers and ACEP physicians. If you need a copy, then please contact me.

The EMS committee is developing a medical director organization to help keep the BLS and ALS medical directors up-to-date and address key financial and legal issues.

The EMS committee is planning to closely follow the EMS commission's pilot studies which are looking at adding advanced skills to the Advanced EMT level. These skills (defibrillation, advanced airway, and limited medications) could be provided in rural areas by Advanced EMTs if, and only if, the service has a medical director.

The EMS committee is developing a Basic Trauma Life Support (BTLS) course program in this state to educate the EMT, Advanced EMT, Paramedic, and physician in basic trauma care.

For these goals to be met, ACEP needs your help. If you are interested in any of these areas (BLS medical director, medical director organization, BTLS course), then please contact me.

LYME DISEASE

THE MINUTE DEER TICK, *Ixodes dammini*, is endemic in Delaware, New Jersey, Pennsylvania and Maryland. This tick is the insect vector capable of transmitting Lyme Disease to humans. Lyme Disease is a curious, potentially chronic illness caused by the recently recognized spirochete *Borrelia burdorferi*. This organism is sensitive to penicillin and tetracycline. Prompt treatment is therefore potentially curative and may prevent the chronic sequelae of infection, so recognition of this syndrome is important.

The early manifestations of Lyme Disease occur in the early spring through late fall. The most characteristic finding is an impressive expanding annular erythematous skin lesion which can grow to giant proportions (Erythema Chronicum migrans). These lesions can be multiple and evanescent but frequently persist for weeks in the untreated patient. The lesion is frequently asymptomatic and may not be noticed by the patient if it is on the back. Accompanying the skin lesions, the patient will frequently have a nonspecific flu-like illness characterized by headache, fatigue, fever, myalgias, and gastro-intestinal upset. This may persist for several months and be confused with mononucleosis.

Within several months of the skin lesions, 5-10% of patients will manifest neurologic disease or cardiac disease. Most commons is Bell's palsy or other cranial or peripheral radiculo-neuropathies. Meningoencephalitis can also occur. Heart involvement is frequently asymptomatic and manifested by varying degrees of heart block.

Sixty-five percent of untreated patients will develop recurring bouts of arthritis within one year of acquiring the disease. Some of these patients can develop a destructive arthritis.

Serologic confirmation of Lyme Disease is now available by sending acute and convalescent sera to CDC or Yale University's Department of Rheumatology. Strategies have been worked out to treat the different stages of Lyme Disease. The initial stages with rash and acute illness can be treated with several weeks of oral penicillin or tetracycline. More severe neurologic and cardiac disease requires 10-20 days of parenteral penicillin in the hospital. Recent studies have suggested similar parenteral regimens may cure two-thirds of the patients with arthritis. For chronic neurologic and arthritic disease, more prolonged antibiotic regimens may be appropriate.

The spirochete that causes Lyme Disease is closely related to *Treponema pallidum* Borrelia species which cause relapsing fever. It does not cause a positive RPR but can be responsible for a "falsely positive" FTA-absorb reaction.

Ten years ago, Lyme Disease was first recognized as a new disease entity in and around the community of Old Lyme, Connecticut. Initially it was felt to be viral in origin. We now know it is caused by one of the largest bacterium known to infect man. It is a treatable disease. Recognition and prompt treatment may prevent serious sequelae.

Prepared by the Editorial Subcommittee of the Medical and Scientific Committee, The Delaware Chapter Arthritis Foundation.

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Snakeroot Extract

Number 6 October, 1985

A NEWSLETTER OF INDIANA MEDICAL HISTORY

Society's Annual History Conference Features Sessions on Military Medicine

"American Military Medicine" will be the topic of two sessions sponsored by the Medical History Committee at the Indiana Historical Society's Annual Indiana History Conference. The conference will be held on Saturday, November 2, 1985, at the Airport Hilton in Indianapolis. The keynote speaker for the sessions will be Robert J.T. Joy, M.D. His paper, "Jonathan Letterman: The Civil War and Modern Military Medicine," will focus on the far-reaching reforms in the operational aspects of military field medicine introduced by Letterman. Letterman was Medical Director of the Army of the Potomac during the Civil War, and his procedures for medical and surgical support for the Union army later became the accepted practices of the United States Army. Some of these procedures include modern field evacuation hospitals, formal medical reports and records, and the ambulance corps. Dr. Joy will also discuss the activities of the United States Sanitary Commission. Dr. Joy's lecture will be enhanced by over 160 slides.

Dr. Joy is professor and chairman of the Uniformed Services University of the Health Sciences School of Medicine in Bethesda, Maryland. Dr. Joy is also a retired colonel in the United States Army Medical Corps. He has published extensively in the fields of physiology, military medicine, internal medicine, and medical history. He has served as Commanding Officer at the United States Research Institute of Environmental Medicine, Natick, Massachusetts; Chief of the United States Medical Research Team, Vietnam; and Director and Commandant of the Walter Reed Army Institute of Research. He has received a number of decorations, citations, and badges for his military service and has been awarded the William Osler Medal from the American Association for the History of Medicine, the Hoff Memorial Medal for Achievement in Military Medicine, the John Shaw Billings Award for the Association of Military Surgeons, and the William P. Clements Award for Excellence in Education. Dr. Joy is also the editor of the *Journal of the History of Medicine and Allied Sciences*.



Robert J.T. Joy, M.D.

The morning session will also include two other papers on the Civil War. Peter T. Harstad, the Indiana Historical Society's Executive Secretary, will present a paper entitled "Indiana Civil War Soldiers as Seen Through the Eyes of the Medical Examiners." On March 3, 1863, a formal system was established for inducting troops into the Union Army. Enrollment districts and boards were created to enlist all able-bodied men between the ages of

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Volunteers Are Vital to Museum

Volunteers are important to any nonprofit organization. Without their dedication and donation of time and services, many organizations would not be able to operate. The Indiana Medical History Museum is no exception to this rule and is particularly fortunate to have several dedicated and exceptionally capable volunteers. Two of the museum's volunteers, Margery A. Jester and Helen L. Davidson, have given many hours of service to the organization.

Margery A. Jester was the museum's first volunteer. Long before the museum had a curator, Mrs. Jester donated her time and services cataloging the museum's large collection of late-nineteenth-century medical books. From 1973 to 1981, Mrs. Jester donated one day a week to the museum. She recently has returned to the museum's volunteer staff and will continue cataloging the museum's library. Mrs. Jester is a graduate of Butler University, where she received both library and teacher training. Upon graduation, she worked at Riley Hospital as an assistant teacher and assistant librarian. During World War II, Mrs. Jester worked in the library of the UCLA, Westwood Campus. In 1946, she joined the staff of the Research and Scientific Library at Eli Lilly and Company and from 1950 to 1951 served as the head of the Business Library at the company. From 1961 to 1971, Mrs. Jester worked for the Indiana Neuromuscular Research



Margery A. Jester

Laboratory cataloging its books. She also indexed the *Indiana Medical History Quarterly* and Dr. Charles A. Bonsett's *Studies of Pseudohypertrophic Muscular Dystrophy* (1969). From 1974 to 1983, Mrs. Jester served on the Indiana Historical Society's Library Committee.

Helen L. Davidson joined the museum staff in August, 1982, as a volunteer curatorial assistant. Since then she has donated to the museum over 1,300 hours of service. In her tenure at the museum, she has organized the museum's archives, cataloged over 300 prints and photographs, and has assisted the curator in cataloging a variety of medical collections. Mrs. Davidson worked at Eli Lilly and Company for twenty-six years, serving most of that time as the company's corporate archivist. In the field of business archives, Helen Davidson's name is well know. She received a Certificate in Archives Administration from American University in 1958, and for several years served as the chairman of the Business Archives Committee of the Society of American Archivists. She has published a number of articles in professional journals and has participated in several national archives and records management conferences. Since 1972, Mrs. Davidson has served on the Indiana Historical Society's Library Committee. Mrs. Davidson is listed in *Who's Who of American Women*, as well as *Who's Who in the Midwest*. Her contributions to the field of archives administration were recognized in May, 1984, when she was elected to emeritus membership in the Midwest Archives Conference.

For the past two years, the museum has been very fortunate to have volunteers who have been willing to devote their time to the beautification of the museum grounds. The Central District Garden Club of Indiana initially consulted with the museum on landscaping. Carrying these plans to fruition were Marybelle Burch, Manuscripts Librarian at the Indiana Division of the Indiana State Library, and Martha E. Wright, Reference Librarian at the Indiana Division of the Indiana State

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ISSN 0743-6033

Snakeroot Extract is a joint publication of the Indiana Historical Society's Medical History Committee (315 West Ohio Street, Indianapolis, Indiana 46202) and the Indiana Medical History Museum (Old Pathology Building, 3000 West Washington Street, Indianapolis, Indiana 46222). The newsletter is mailed to members of both the committee and the museum.

Charles A. Bonsett, M.D., *Editor*
Ann G. Carmichael, MD., Ph.D., *Asst. Editor*
Katherine Mandusic McDonell, *Managing Editor*

Submit all items for publication in the newsletter and inquiries about membership information to the Managing Editor, c/o Indiana Historical Society, 315 West Ohio Street, Indianapolis, Indiana 46202.

Snakeroot Extract derives its name from the white snakeroot plant, a plant that is significant in Indiana medical history. For years, a mysterious disease called milk sickness plagued early Hoosiers. There were many theories as to the disease's cause, but the actual cause remained unknown until the 1920s. At that time, the disease was traced to the white snakeroot plant or, rather, to the consumption of milk from cows that had eaten it. The plant contains the poison tremetol.

Volunteers

(continued from Page 2)

Library. Both Ms. Burch and Ms. Wright have donated their vacation time to planting geraniums, tulips, ivy, and chrysanthemums on the museum grounds. They have also helped maintain the museum's medicinal herb garden.

More recent additions to the museum's volunteer staff have included Carol Lewis, Laura Durrett, and Kathryn A. Jester. Carol Lewis, from the Speedway Public Library, has assisted in cataloging the library's books. Laura Durrett, a senior at Broad Ripple High School who is interested in a career in museums, worked this past summer in the cataloging and conservation of several of the museum's latest acquisitions. Ms. Durrett plans to continue her volunteer work at the museum through the coming year. She will be updating the museum's permanent exhibit on the history of mental health care. Kathryn A. Jester, Margery Jester's daughter-in-law and a former librarian at Connersville Public Library, recently has joined the volunteer staff and will also be assisting in the library. Through the skills and talent brought to the Indiana Medical History Museum by its volunteers, the organization's operations and programs have been aided tremendously.

Society Features Sessions

(continued from Page 1)

twenty and forty-five. The enrollment boards consisted of a provost marshal and two other persons, one of whom was a licensed, practicing physician. The reports of these enrollment boards later were compiled and published by Dr. J.H. Baxter, the Chief Medical Officer of the Provost Marshal General's Bureau. Using these reports in his research, Dr. Harstad finds that medical examiners in Indiana, as well as other states, had to contend with both healthy men who tried to feign illness to avoid the draft, and sick men who tried to hide their illnesses so they could receive bounties for entering the service.

Marybelle Burch, manuscripts librarian at the Indiana Division of the Indiana State Library, will present a paper entitled "George F. Chittenden: Surgeon of the Sixteenth Indiana Infantry." Chittenden was commissioned Assistant Surgeon of the Sixteenth Indiana Volunteers on June 11, 1861. The regiment saw action in Virginia, Maryland, Kentucky, Texas, and most importantly, at the siege of Vicksburg. Chittenden stayed with the regiment until illness forced him to resign in February, 1864, by which time he had risen to the rank of Medical Director of the Thirteenth Army Corps. Beset by military and



Helen L. Davidson

domestic crises, the medical staff of the Sixteenth Regiment sometimes consisted of only Dr. Chittenden and a few nurses. Yet, Chittenden, unlike many surgeons, successfully adjusted to military life.

During the afternoon session, Charles L. George, M.D., and Harry G. Becker, M.D., both of Indianapolis, will present a session on medicine during World War II. Dr. George's presentation will focus on his experiences at the 58th Evacuation Hospital. Dr. George is a retired anesthesiologist from St. Vincent's Hospital in Indianapolis. During World War II, he served as a Major in the United States Army and was assigned to the 58th Evacuation Hospital. The 58th Evacuation Hospital was activated at Camp Carson, Colorado, on July 25, 1942. In August, 1943, the unit was shipped overseas to Australia. The unit followed the front-line assault of the Americans from Milne Bay on New Guinea to the Central Philippines. The unit had a total personnel of 247 enlisted men, 37 officers, and 14 nurses. The hospital had a normal bed capacity of 400, but could be expanded to 800.

Dr. Harry Becker, a retired Indianapolis surgeon and assistant professor of surgery emeritus at Indiana University School of Medicine, will talk about his experiences at the 155th Station Hospital, a 500-bed hospital, and the 153rd Station Hospital, a 250-bed hospital. Becker was a colonel during the war and commanded both of these outfits. His unit served in Australia, New Guinea, Halmahera Island, and the Philippines.

Those interested in attending these sessions on "American Military Medicine" must register for the Indiana History Conference. The registration fee is $3.00. For more information about the conference, and luncheon reservations, contact the Indiana Historical Society, 315 West Ohio Street, Indianapolis, Indiana 46202 (317/232-1882).

Society Receives Papers of Cardiologist

Mrs. Easter Middleton recently donated the papers of her late husband, Harvey N. Middleton, M.D., to the Indiana Historical Society. Harvey Middleton, M.D. (1895-1978), a civic leader and an Indianapolis physician, was the first black doctor on the staff of City Hospital (now Wishard Memorial).

While a child in South Carolina, Middleton became acutely aware of the inferior medical care given to blacks and decided to become a doctor. Middleton encountered much prejudice in obtaining a medical degree. After working his way through several schools, he was awarded a medical degree from Meharry Medical College in Nashville, Tennessee. Yet, Middleton found it difficult to be accepted as a physician and decided to further his education. He attended Harvard University, completing postgraduate work in cardiology. In 1928, he joined the staff of St. John's Hospital in Anderson, Indiana. After nearly eight years at St. John's Hospital, Charles Myers, M.D., then superintendent of the Indianapolis City Hospital, urged Middleton to leave Anderson and join the staff at the Indianapolis hospital. Although Myers tried to persuade others on the hospital staff to accept Middleton, he was unsuccessful in securing an appointment for him. Middleton, however, was allowed to volunteer in the heart clinic for outpatients. He could not earn a living as a volunteer, so he purchased a portable electrocardiograph machine and went into private practice. After persevering for nearly eight years, Middleton was finally accepted on the staff at City Hospital. He continued his research in cardiology and presented or published over a dozen papers on that topic.



Pictured giving a demonstration of a portable stethocardiette in his North Illinois office are Dr. Harvey N. Middleton and his sister, Ollie Mae Middleton, a nurse, who also served as her brother's assistant for over twenty-five years.

The Middleton collection consists of medical journals, photographs, newspaper clippings, personal correspondence, and presentations and articles on his medical research. Also included in the collection are records of Middleton's many years of service with the local YMCA and the Flanner House.

Indiana Historical Society
Indiana Medical History Committee
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Yellow Fever and the Indiana Connection

An Historical Note About Dr. Walter Reed (1851-1902)

EDUARDO TEJADA, M.D.
Indianapolis

85 Years Have Passed Since Walter Reed's First Presentation of His Classic Work on Yellow Fever. . .

ON OCTOBER 23, 1985 the state of Indiana and especially the city of Indianapolis will be celebrating the 85th anniversary of Walter Reed's first presentation of his now classic work on Yellow Fever.

This first presentation, which was made in Indianapolis, is not generally known or published, and it is historically important. To commemorate it, I have put together some notes about this occasion.

It was around 1896 that the fear of Yellow Fever, also known as "Yellow Jack" was present in Indiana. An epidemic developed in the South, mainly in New Orleans, and was spreading to the North in cities along the Mississippi and Ohio Rivers. The *Indianapolis News* of October 1897 reported a large number of refugees from the South coming into the state. A considerable number of people had died in cities in this area, including Louisville and Cincinnati, and cases had been reported as far north as Montreal and to the east in Philadelphia. The mechanism of spread of the disease was, of course, not understood but it was regarded as an infection similar to typhoid fever.

There was, at that time, great interest in the research of the Italian bacteriologist Dr. Giuseppi Sanarelli, who was working on the Island of Flores off Montevideo, Uruguay, South America. Sanarelli announced in June 1897 the discovery of the cause of Yellow Fever—erroneously, as proven later by Walter Reed—to be a bacillus (*Bacillus icteroides*) which was found in about 50% of the patients he examined.

The failure to isolate *Bacillus icteroides* from the blood of the living Yellow Fever patients and from the remains of those who had succumbed to the disease, prompted the research group of the Yellow Fever Commission, Reed, Carroll, Lazear and Agramonte, to give attention to the theory of the Cuban physician Carlos Findlay on the propagation of the disease by the mosquito, then called *Stegomia* or *Culex fasciatus* and today known as *Aedes aegypti*. Dr. Walter Reed himself stated, " . . . . to Dr. Carlos J. Findlay, of Habana, must be given full credit for the theory of the propagation of Yellow Fever by means of the mosquito, which he proposed in a paper read before the Royal Academy in that city at its session on the 14th day of August 1881." (Reed, 1901)—(Note that Habana was spelled in Reed's original article with "B" as it is spelled in Spanish, although in English it is spelled with "V".)

The Twenty-eighth Annual Meeting of the American Public Health Association was to be held in Indianapolis from October 22 to 26 of 1900.

A few days prior to the 23rd of October, Walter Reed, a young Army surgeon who had been assigned to leadership in the Yellow Fever Commission, came to Indianapolis, rushing from headquarters in Cuba to give his preliminary report on this disease.

The first day of the sessions was occupied exclusively by the Board of the Association, and was held in the amphitheater of the Pathological Laboratory at the Central Insane Hospital, now called Central State Hospital.

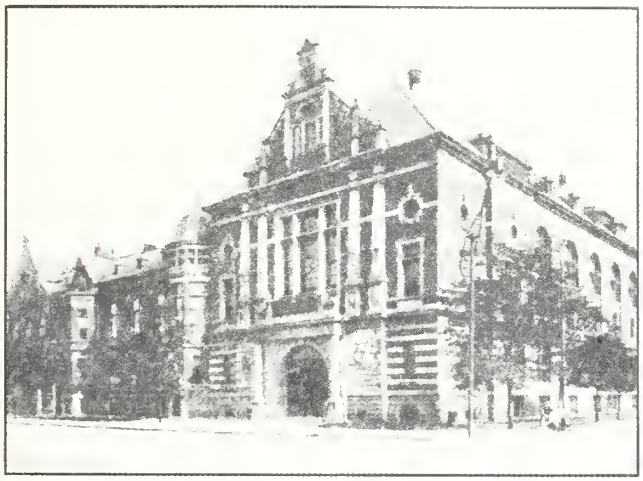
The first session of the entire body of the Association opened on Tuesday, October 23, 1900, at ten o'clock in the morning during a beautiful October Indian summer. Governor Mount ex-

From the Depts. of Pathology, Richard L. Roudebush Veterans Administration Medical Center and the Indiana University School of Medicine, Indianapolis.

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Acknowledgments: Mr. Mark E. Masser, VA Medical Media Production Service, for preparing the two photographs, and Ms. Nancy Wilson for typing the manuscript.

FIGURE 1



1900 – Then

FIGURE 2



1985 – Now

tended his greetings to the members, on behalf of the state of Indiana.

At the afternoon session, Reed was given a place on the platform, though his work was not on the official program of the session. He received permission to read his paper entitled, "Some Observations on Yellow Fever in Cuba," which he presented for a period of 40 minutes. He used up the first allowed 20 minutes, and was granted another 20 minutes. About 150 physicians were present in the German House (*Fig. 1*) now known as "The Athenaeum Turners" (*Fig. 2*), today still standing at the intersection of East Michigan and North New Jersey Streets and Massachusetts Avenue in downtown Indianapolis.

At the time of that meeting, Walter Reed was 49 years old. He was born on September 13, 1851 in Virginia, obtained his medical degree from the University of Virginia, and, eager to travel, he entered the Army Medical Corps. He died on November 23, 1902 after peritonitis developed, when his appendix ruptured and was resected three days previously. His work after the Indianapolis presentation was just over a two-year period.

It is interesting that the monthly Bulletin of the Indiana State Board of Health for October of 1900 gives a synopsis of the papers presented and the meetings, but makes no mention of the paper by Walter Reed. The Annual Report of the American Public Health Association (1901) made references to papers having to do with the etiology of Yellow Fever but still made no reference to Walter Reed's first presentation. Even the press was equally indifferent and the *Indianapolis News* made references only to his name as: . . . ."Surgeon Reed had presented a paper of Observations of Yellow Fever in Cuba." It appears then that those hearing the paper at that time did not appreciate its vast importance. However, the Annual Report of 1903 makes enthusiastic mention of Dr. Walter Reed's discovery.

The summary of the original paper by Dr. Reed includes: a) the bacteriologic results of blood cultures obtained from 18 cases at various states of infection with Yellow Fever, as well as those taken from blood and organs of 11 Yellow Fever cadavers, and b) the results obtained from the inoculation of 11 non-immune individuals bitten by the mosquito *Culex* or *Stegomia fasciatus* previously fed on blood of patients suffering from Yellow Fever. Two positive transmissions of Yellow Fever occurred following mosquito bites within the usual period of the incubation of the disease.

He concluded that: a) The *Bacillus icteroides* of Sanarelli did not cause Yellow Fever and when present should be considered as a secondary invader in this disease, and b) the mosquito serves as the intermediate host for the "parasite" (today known to be a virus, a flavivirus of the Arbovirus group) in Yellow Fever.

SUGGESTED READING

1. American Public Health Association—Annual Report, 1901 and 1903.
2. Bean WB: *Walter Reed—A Biography*, University Press of Virginia, Charlottesville, 1982.
3. Bean WB: Walter Reed and Yellow Fever, *JAMA*, 250(5):659-662, 1983.
4. Monthly Bulletin Indiana State Board of Health, Vol. II, 1900-1901.
5. Reed W, Carroll J, Agramonte A: The etiology of Yellow Fever, *JAMA*, 250(5):649-658, 1983 (republication of original article *JAMA*, 36:431-440, 1901).
6. Rice TB: The Hoosier Health Officer—A Biography of Dr. John N. Hurty, *Bulletin of the Indiana State Board of Health*, January 1939 to December 1946.
7. Woodall JP: From the Centers for Disease Control: Summary of a Symposium on Yellow Fever. *The Journal of Infectious Diseases*, 144(1):87-91, 1981.
8. *Yellow Fever, First Edition*. McGraw-Hill Book Company, Inc., 1951. Strode GK, Ed.

The AMA Market Area Profile Service

A New Medical Practice Planning Tool

THE AMERICAN MEDICAL Association has announced a new activity that will be of interest to any physician who wants to develop or modify a medical practice. The AMA MARKET AREA PROFILE (MAP) SERVICE, created as a part of the Association's Competition Action Plan, is designed to assist physicians in establishing and maintaining a successful medical practice by providing them with detailed demographic and health resource data on an existing or planned practice site.

The MAP Service offers physicians individualized, computer-generated data profiles on any area in the United States. Each Market Area Profile consists of six data reports:

- The Area Profile Report—1980 census data (population, age, sex, housing, occupation, income, etc.) for the area the physician has selected.
- The State Area Profile Report—1980 census data for the state in which the physician-selected area is located, provided for comparison purposes.
- The Demographic Trends Report—1980, current year, and five-year projected population and demographic data (population, age, sex, household size, etc.).
- The State Demographic Trends Report—A trends report for the state in which the selected area is located, provided for comparison purposes.
- The Physician Report—Statistical information on the number of physicians in the area, by medical specialty, age, and major professional activity.
- The Hospital Report—Detailed information on hospitals in the selected area, including: number of beds; admissions, utilization and census figures; facilities and services; and a profile of the medical staff. (If there are more than four hospitals in the selected area, a summary listing of the hospitals is provided instead.)

The information provided in a MAP profile can be beneficial to all physicians, no matter what their practice situation. New physicians will find it helpful in practice site selection decisions, whether they are investigating specific practice opportunities or comparing several practice sites. Established physicians can use the profiles to make decisions about expanding, relocating or modifying an existing practice.

For example, a physician might wish to use the MAP demographic reports to compare his current patient base with the potential patient population of the community. Another physician might want to study the five-year projected population figures in order to develop a long-range practice plan.

In any event, the Market Area Profile Service is a valuable planning tool that can help any physician make the right decisions about a medical practice.

A key feature of the MAP Service is the flexibility offered to the physician subscriber in selecting the area to be profiled. There are four choices: (1) County, (2) ZIP Code, (3) City/Town, or (4) Ring Study. The Ring Study option is a unique aspect of the MAP Service that allows the physician to precisely define the area of study in relation to an existing or planned office site. Using a specific street intersection as the center point, the physician can define the area as a ring *of any size* (for example, 5 or 10 miles) around that intersection. This is extremely useful in instances where a standard geographic description does not adequately describe a physician's service area.

The cost of the Market Area Profile Service ranges from $95 to $195, with substantial discounts for AMA members, medical students and residents. Along with the six profile reports, physicians receive a User's Manual that provides data source information and offers useful advice on how to interpret and apply the data to a practice situation.

For further information, and to receive the MAP Registration Package, please contact the AMA Market Area Profile Service, American Medical Association, 535 N. Dearborn, Chicago 60610—(312) 645-4719.

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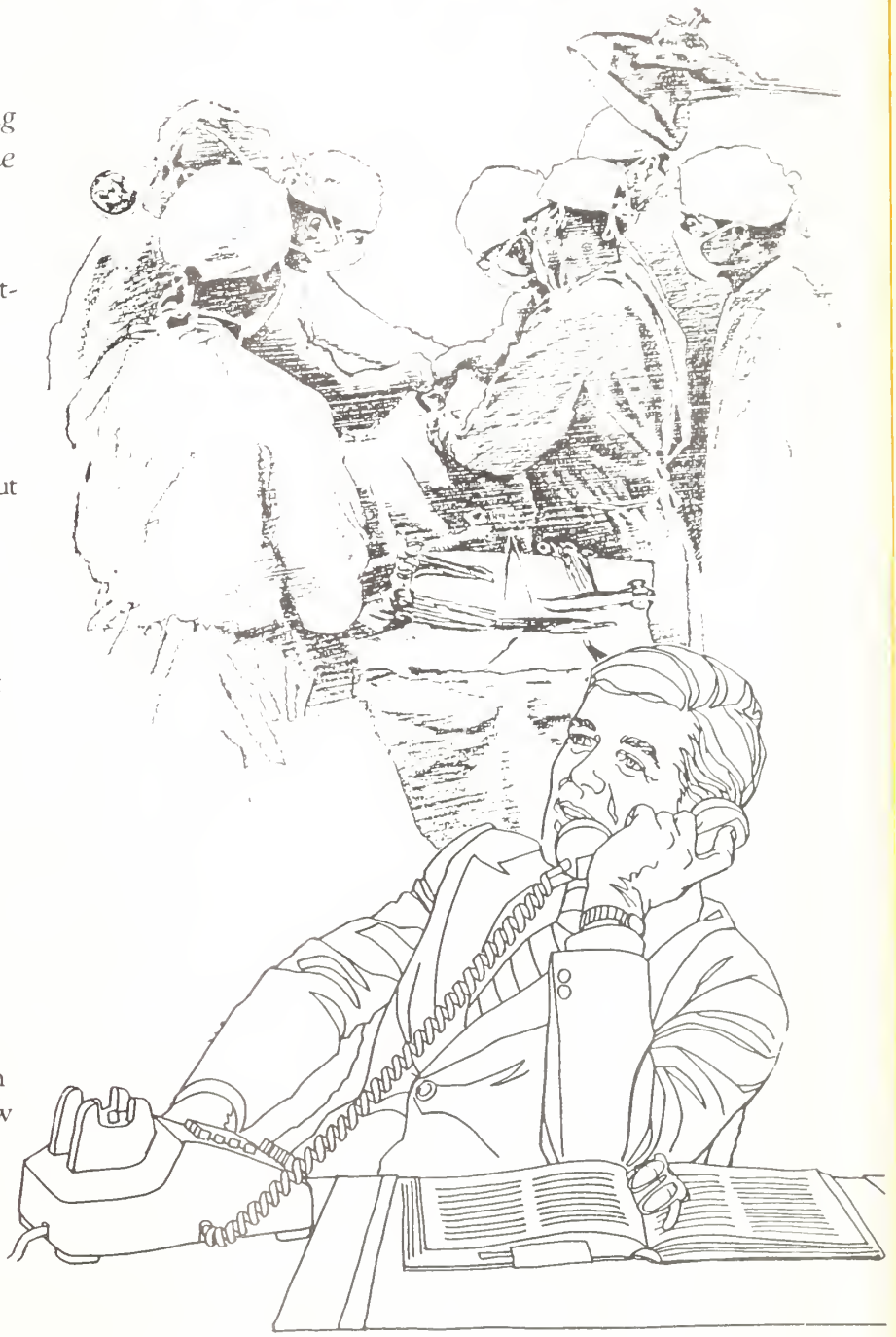
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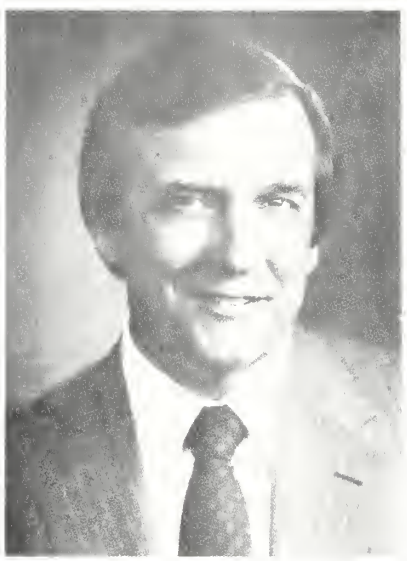


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ISMA/IPA: A Future Alternative for Indiana Physicians



LAWRENCE E. ALLEN, M.D.
President
Indiana State Medical Assn.

MUCH OF THE CONVERSATION that is heard in the interchange between physicians as they discuss today's realities has to do with *the corporate takeover of medicine* and the eventual salaried status of physicians.

One of the options that has certainly been obvious to physicians in all walks of medical practice is that of comingling with businessmen to form the delivery systems that make up our medical insurance plans for the American patient. To many physicians, this may have seemed an attractive solution, if not the destiny of physicians, to be involved in such an industrial complex as corporate medicine. Many statements have been heard that reassures us that if physicians are a part of the corporate profile of any delivery system, it will follow that the ethical structure that is essential to physicians and their patients will be preserved. Although disappointing, it should not be surprising that such a belief is unfounded.

We have discovered in every example where physicians make up the management structure of the "for-profit" entity, or even the "not-for-profit" entity, that those physicians behave as any businessman would where profits are central for the survival and prosperity of the delivery system.

Consequently, it is sharply apparent that there is one basic fact that underlies the purpose of our dedicated profession, and that is simply this: *The welfare of the patient is paramount.* If it befalls the responsibility of physicians to provide the conscience within any delivery system that places the welfare of the patient over the corporate profit margin as a priority item, that conscience can only be expressed by those physicians who are undaunted by a "vested interest," a "conflict of interest," or "lack of interest" in dealing with each individual patient.

This simply means that the individual or agency responsible for reviewing utilization of services is not the appropriate individual or agency to judge the status of quality assurance. It makes little difference whether the administrative team is provided by a large hospital system, an HMO, American Medical International, or a regional PRO. When you place the responsibility for utilization review and quality assurance review under the same contract, the result will inevitably be the same—quality will be sacrificed under the terms of utilization review. We have already seen many examples of this, and we're going to see many more.

One very disturbing trend that points to the future in very clear, predictive terms is the increasing number of employed physicians. Whether we pay a handsome consultation fee to an investigative firm to spell out the directions that are taking shape for physicians in our medical marketplace, or whether we simply count noses within our own community, it is increasingly clear that more and more physicians are becoming salaried or contracted by hospitals, businesses, insurance companies, alternative delivery systems such as HMOs (i.e., the metro plan concept) and, yes, even academic faculties salaried within our educational institutions, wherein private practice is prohibited. Each example brings physicians as a group closer and closer to the employee status—employed not by the patient, but by an agency that determines the destiny of the patient, in total indifference to the consent of the patient. This trend is increasing year by year and promises to constitute a majority of the physicians in this country by 1995.

This disquieting prediction is responsible for no small amount of rumbling in the mountain of organized medicine, because if large corporations, large networks of hospitals, and industry itself are to dominate the social and political status of the physician—what purpose and what meaning shall the various state and national associations have for such an employed physician? Well, I suggest to you that for physicians the county medical society and the state and national medical association may become the only recourse to total domination by forces outside the

doctor-patient relationship. These forces are subject not to the humane and ethical principles that are dear to the philosophy of physicians, but rather a doctrine of profits, management vs. labor, market demands, political expediency, and governmental regulation.

How does an employed physician confront such domination? Does he address his grievances to the departmental chief of professional relations—does he consult with the corporate chief in charge of provider services—or, does he write a letter to the secretary of the Federal Bureau of Contracted Medical Personnel? I suggest to you that the future of such avenues of redress will be fraught with unending frustration.

The future for employed physicians as well as "fee for service" physicians will weigh more and more upon the ability of state medical associations to provide support services and to represent physician constituents where negotiations are appropriate and collective bargaining is vital. One may say this sounds very much like the formation of the labor union—I'd suggest to you that such an analogy is an understatement. To represent physicians in the industrial complex that is taking shape in our society today will require much more versatility, skill and influence than has characterized any affiliation of employees in the history of labor unions.

What, then, is the alternative for physicians? *Physicians must face the challenge to our profession with collective purpose and responsiveness.* To exercise a role in the management of the health care delivery system, physicians must participate in the process, not as fragmented groups of contracted providers, but rather a determined community of physicians throughout our state who support a common set of priorities that may be more favorably expressed through a statewide, open panel of physicians.

The leadership of ISMA favors this expanded role for physicians, as well as an extension of our state medical association. The need for ISMA involvement has been increasingly expressed throughout the many deliberations that have characterized the proceedings of the ISMA Executive Committee and Board of Trustees during the past year. These deliberations were formalized in two recommendations of the Ad Hoc Committee on Alternative Health Care Delivery Systems during the meeting of the Ad Hoc Committee, July 24, 1985:

(1) That ISMA pursue the formation and development of a separate service corporation for the purpose of providing negotiating and representative-like services for its members.

(2) That ISMA consider forming a statewide IPA.

The ISMA Board of Trustees reviewed these recommendations presented by the Ad Hoc Committee on Alternative Delivery Systems, Aug. 25, 1985, and passed favorably on each recommendation. It was the action of the Board of Trustees to submit a resolution to the House of Delegates in November, calling for the formation of a statewide IPA.

In forming a statewide IPA it is the intent of the Board of Trustees and the ISMA leadership to provide an option by which physicians may form a network capable of cooperative marketing. Such an ISMA-sponsored IPA would exist as a non-profit subsidiary of ISMA with the ability to negotiate and contract with all health care purchasers, including those plans currently in existence. A statewide IPA represents an agency structured to provide advocacy, not only for its participating physician providers, but also for the patients that these physicians are destined to serve. This expanded role of representation on the part of ISMA offers an immediate advantage for its physician participants in dealing with a broader, more diverse public, as well as meeting the challenge of issues that are increasingly more complex. Just as our adversaries have become more sophisticated in the current arena of health care delivery, so must the association that represents Indiana physicians.

By the time this issue of INDIANA MEDICINE reaches you for your perusal, you will have received a letter regarding participation in ISMA IPA-HMO containing a letter of intent. I am sure you will agree with me that this communication deserves your most serious and responsive consideration. Your decision to contract with an ISMA-sponsored independent practice association (IPA) is the most important choice you can make for the future of Indiana physicians.

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The Health Care System in 1995

A Message from the Executive Director

FUTURE PLANNING and strategic planning for the Association becomes imperative with each succeeding year. In meeting this challenge the Association has endeavored, during the past decade, to set forth goals which are realistic and achievable.

Most organizations have some type of formal planning process. However, most associations seldom approach the level of sophistication in planning as achieved by the largest institutions, both public and private, where thousands of staff hours are utilized to relate projections of social or economic change to potential changes in markets, costs and resources.

Experience dictates that the future is anything but certain, that change and innovation are common, complex and constant. New technologies can produce revolutionary changes in relatively short periods of time.

If we can accept only a modest portion of the forecasts that fill today's publications we are compelled to assume that we are entering a period of accelerating change. Studies have been made to provide a description of the health care system as it is likely to appear in the mid-1990s.

One such recent study which warrants our attention is that conducted by Arthur D. Little, Inc. for the Health Insurance Association of America. This study attempts to identify the basic forces that affect the health care system, and are independent of decisions made by health care policy makers.

Study projections are based on the following trends which are assumed will continue through the next decade. They are:



DONALD F. FOY
Executive Director
Indiana State Medical Assn.

1. A U.S. population growth of about 18% between the years 1980 and 2000.
2. Continued growth in the proportion of the population that is aged 65 and over and, especially, in the population aged 75 and over.
3. Continued improvement in the financial status of many of the aged.
4. Continued growth in the supply of physicians, resulting in a marked surplus by 1990 and an even larger surplus by 2000.
5. A continued oversupply of hospital beds, reflecting diminishing need and the difficulty of dismantling capacity already in place.
6. Economic growth, inflation rates and employment rates falling between existing high and low projections, without any major disruptions such as large scale war or other comparable development.

From the multitude of findings in the study the following ones stand out as they may impact the future of medical practice and the future of ISMA.

1. Government and business purchasers of health care will intensify efforts to contain costs, which will dominate the health care agenda.
2. The federal government continuing its retreat from guaranteeing health care, will concentrate on limiting its financial outlays. This represents a shift away from the concept that government should ensure equal access to health care for all.
3. The government will continue to refine the concept of DRG-based reimbursement as a major tool for cost containment. Eventually, however, the complexity of DRGs will probably lead to their replacement.
4. Employers will continue to be more demanding about health care cost containment.
5. The health system in 1995 will be highly competitive, and to some degree regulated. Because of the system overcapacity, competition is inevitable with or without regulation.
6. Consumers will increasingly accept responsibility for their own health care. Consumers with good health habits will be less willing to subsidize care for policy holders whose lifestyles make them higher health risks.
7. There will be more health care services for the aged.
8. By the mid-1990s or earlier there

will be intense public pressure for protection against the costs of long-term care.

9. A variety of specialty services will emerge reflecting physician competition for market niches.

10. The shift of care from inpatient to ambulatory settings will accelerate.

11. More health care will be delivered in manager systems including HMOs, preferred provider networks and traditional fee-for-service care with tighter controls on utilization. Population mobility and increased physician specialization have rendered obsolete the ideal of a long-term relationship with a family physician who provides most of the care needed. Consumers will want guidance in making health care decisions. They will increasingly prefer systems in which physicians are subject to external monetary control.

12. By the mid-1990s growth in entrepreneurial, free standing ambulatory care services will have tapered off and many will have been absorbed by large health care systems.

13. A tiered system of care will be recognized and accepted. There will probably be a multi-tiered system, with different options available to the eligible poor, the unemployed or medically indigent, those with group insurance, and the affluent.

14. Physician income will grow more slowly.

15. More physicians, and a larger proportion of women physicians, will practice in salaried settings.

16. Physicians in private practice will join efficiently managed groups. Solo practice will virtually cease to exist.

17. HMOs and other capitation arrangements will experience explosive growth.

In conclusion, it appears that government and business will be the forces for change in the provision and the financing of health care in the next decade. Other changes anticipated include trends toward managed health care, integration of hospitals and physician groups into larger, more powerful and more business oriented units with a de-emphasis of inpatient care.

Resident Physician Essay Contest

During the 1985-86 resident training year the Resident Medical Society of the ISMA and INDIANA MEDICINE will conduct a medical essay contest. All members of the Resident Medical Society are eligible to enter. Each author may choose the subject. Essays (medical articles) will be limited in length to 10 pages of typescript, properly margined and double spaced. Illustrations are encouraged and are to be included in the space limitation.

Entries should be mailed to INDIANA MEDICINE, 3935 N. Meridian St., Indianapolis 46208, and be postmarked prior to Jan. 1, 1986.

Judges will consist of two specialists within the field of the article, three medical education directors from Indiana institutions with approved residency training programs, and one member of the INDIANA MEDICINE Editorial Board.

Authors of the articles judged to be the four best will receive prizes of $100 each, and an additional $100 prize will be given to the best article of the four.

All prize-winning articles will be published in INDIANA MEDICINE. It is hoped that space will allow the publication of other entries to be chosen in the order of their numerical scores.

Essays will be judged on the following criteria:

SCIENTIFIC MERIT: Research methods, data analysis, subject or patient population selection, control of variables, literature analysis.

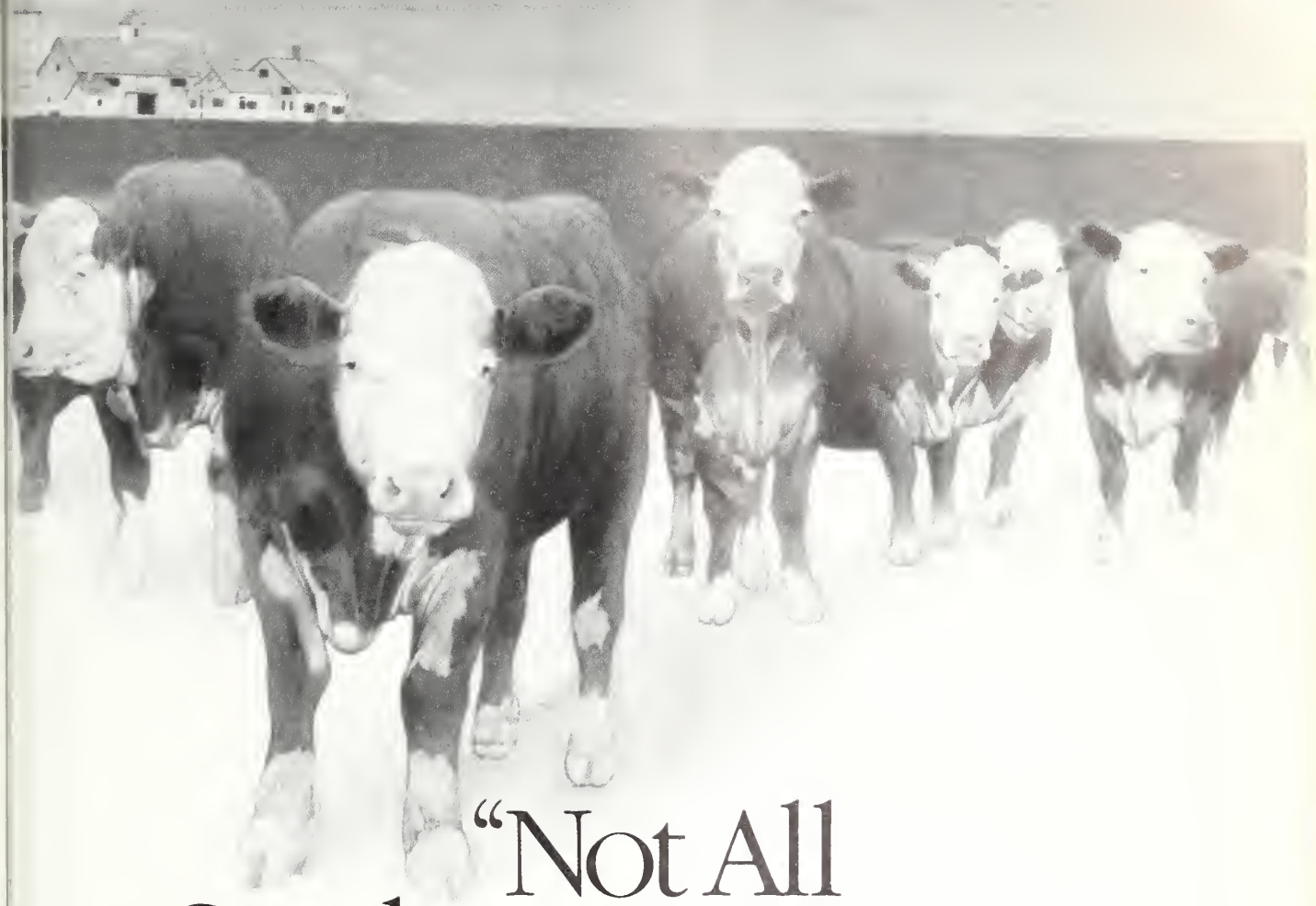
APPLICABILITY: Usefulness of results to private practitioner, academician, researcher.

CONTENT: Depth of analysis, continuity of discussion supporting the main thesis, feasibility of conclusions.

INNOVATION: Uniqueness of idea, creativity, improvement of existing techniques, previously undiscovered data, advancement of basic understanding.

Each essay will be assigned a numerical score for each of the four judging criteria by each judge as follows:

0 Unacceptable	3 Good
1 Poor	4 Above average
2 Fair	5 Excellent



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JOHN H. GIBBON JR., M.D. (1903-1973)

With a Letter about His Background and Boyhood by Marjorie Gibbon Battles

HARRIS B SHUMACKER JR., M.D.
Bethesda, Md.

Abstract

This is a character sketch of John H. Gibbon, Jr. based upon the recollections of his sister and those of a devoted friend and colleague. It is written with the hope it will help preserve him as the person he was and will be of assistance in understanding his professional career and accomplishments.

From the Edward Hebert School of Medicine, the Uniformed Services University of the Health Sciences, Bethesda, Md.

Correspondence, reprints: Harris B Shumacker Jr., M.D., U.S.U.H.S., 4301 Jones Bridge Road, Bethesda, Md. 20814.

Publication supported by the Mildred Ramsey Fund of the Indiana Medical Foundation.

MANY OF THOSE who have contributed significantly to the progress of medicine have disappeared from man's memory. At times, to be sure, they are rediscovered as historians dig deeply into the roots of our past. Most of them became known to us solely by what they did to push forward the frontiers of our knowledge; what they were like as persons is a void. Moreover, the biographical notes and monographs which are more readily available usually deal primarily with their accomplishments and the influence they had—rarely do they reveal them as the individuals they were. Some have been written in this way because of the authors' conviction that achievements constitute the essential elements worthy of preservation while personalities and ways of life are of comparatively small consequence; others because this mode of presentation has been dictated by the policies of the sponsor or the publisher. Regardless of the reason, the resultant work has left us with little or no picture of one who did what he did because of what he was.

There are exceptions to be sure, persons whose life-portraits have been painted so vividly in words that we walk beside them as we read, feel with them, enjoy their happy moments, suffer their pangs of sorrow, understand what they wanted out of life, and whether they reached their goals or failed to do so. How often we wish that this were true of all those whose work we admire and upon which we depend so much. How often we wonder what drives led to their successes, whether personal attributes contributed to their failures, what made them continue or alter their course after reaching a primary objective—what they were like, what made them tick.

Such thoughts prompt me to undertake this essay. John H. Gibbon, Jr. is, or should be, known by everyone for his important contributions. His development of the heart-lung machine and his demonstration for the first time that it could be used successfully as a substitute for a patient's heart and lungs, while an intracardiac malformation was corrected under direct vision, not only changed the entire course and applicability of heart surgery; it marked the beginning of an entirely new surgical era. It is my purpose to try to produce a short character sketch of Jack, as he was commonly known. The man whose contributions gave operative surgery a completely new dimension must not be remembered solely for his accomplishments; he must also be kept alive as an individual who left an indelible imprint upon all who were fortunate enough to be his friends. It is my hope that those who never knew him will, in part at least, become acquainted with his unique and interesting personality, and those who did know him may enjoy a characterization of him through the recollections of his devoted sister and those of a colleague who was fortunate enough to enjoy an unusually intimate comradeship with him.

I am unbelievably lucky in having an extremely delightful and informative letter from his sister, Marjorie Battles. This important document which

describes so well Jack's family background and his years of growing up was not written for publication, but spontaneously and informally in response to my request when I was preparing a biographical memoir for the National Academy of Sciences of which he was one of the few surgical members—a short biography, slanted, according to the customs of the Academy, primarily toward his contributions and their significance. I am more than happy with Marjorie's account of his family and his younger years; no one else could have done it so well. I am concerned about my own effort to paint a picture of the adult Jack since I realize fully that others would have used different pigments and brush strokes. At the same time I have hopes that it will be a reasonable likeness; I have certainly had every advantage one might desire. We were the warmest of friends for years and we understood one another. We talked endlessly about every conceivable subject, shared hopes and disappointments, played together. We and our wives visited one another frequently and went to surgical meetings together year after year, in the States and abroad. We held each other in that deep affection which only the closest companionship of two men can make possible.

First, let us take a look at the family from which he came, his boyhood, and his years of maturing into a young man, as imprinted in the memory of his only sister. This is what Marjorie wrote to me, with no alteration whatsoever.

Dear Harry:

I've had a hard time deciding where to pick up the story of my mother and was bogging down in an effort to describe her father* (the only one of our four grandparents who lived into our lifetime) when I hit on the idea of sending you an obituary which I have enclosed. "Who's Who 1920-21, Vol. II," gives a good account of him too. His Army career, as you see, was distinguished. What distinguished him to his grandchildren was his affection for us, his lovely wit, and the admiration in which the world seemed to hold him. His visits to us in town and at the Farm, where he taught us how to tie bunches of asparagus so that the knot wouldn't slip, were joyful occasions. He was at my wedding at the Farm, and was a great support to Winnie, who loved him.

He married my grandmother, Margaret McFadden, in 1861, and after



John H. Gibbon Jr.

the Civil War she went West with him taking two babies who, I believe, crossed the Isthmus of Panama in donkey panniers. She spent the year 1868 at Fort Mojave on the Colorado River where she was the only white woman for miles around. She became legend in the "Old Army" for mothering homesick young soldiers in the wilderness.

My mother, Marjorie, was the fourth of "the five beautiful Young sisters." She learned to read at age 4. I have a book of Fairy Stories given to her as a prize "for finishing her first reader on her fourth birthday." She said that the school room where the older girls were being taught was where the fun was. She never stopped reading. I think Jack got his love of poetry from her. As Grandfather's posts changed she lived all over the West: Texas, Oklahoma Territory, Kansas, California. Unfortunately, I don't know the details. Absorbed in our own lives we asked few questions, but we did have a vague feeling of adventure in our background. Grandfather was in the Philippines 1899-1901, grandmother had died, the older sisters were married, and Mother took her ten year younger sister to Dresden to school where they spent a happy year in a pension with some gemutlich frauleins. She had met Father during the Spanish War at Jefferson Barracks, Missouri, and they were married in San Francisco in 1901 while Gramp was commanding the Army's Department of California. Quite a long courtship! In Philadelphia she made a warm place among Father's friends, but she has amusing tales of what some Philadelphians had expected of the "western" bride!

Mother inherited her quick wit from Gramp and it was matched by Father's. Between them they made the kind of home every child should have—warm, affectionate and stimulating. They adored their children. Why we weren't spoiled rotten I don't know—except that we were left in no doubt about their standards and we were expected to measure up. Chivalry, "being a good soldier," fair play—the old fashioned virtues—weren't preached, but Father by example and Mother by what she read us managed to put over the idea. We learned "If" by heart, for instance.

Mother was quick in all her ways, witted and -tempered. Her tongue could bite. She was also loving, with ready sympathy for anyone's plight, hospitable with, I now think, an extra degree of open-handedness stemming from her background. At any rate our house had many visitors who often stayed weeks. Army cousins fattening for West Point, Southern cousins, up for sessions with their Philadelphia dentist, a refugee White Russian, a homesick Louisiana bride met on a commuting train. She was eager and

*Lieutenant General S.B.M. Young

also shy. She was energetic. When Father went to France in 1917, leaving her with four children and a greatly reduced income, she, with several other ladies, set up an antique and tea shop where she also sold Lynfield Farm produce—butter, eggs, asparagus. At the same time she was running the Surgical Dressings Department of the Philadelphia Red Cross. Her interest in herbs antedated their fashion. She made the herb garden (later Maly's rose garden) around which Father built the serpentine brick wall and for a time meals were pretty highly spiced, while the collection of herbs also grew. She was a first-rate gardener, Father had an eye for design, and they turned the chicken houses at the Farm into gardens and flower beds. You know the layout.

I can't quite put my finger on her influence on Jack but I'm sure it was great. They were devoted to each other and I think her death, one week after Father's, was the greatest blow he ever had.

Now for Jack. He was eighteen months younger than I, Sam eighteen months younger than he, and Bob three years younger than Sam. In our childhood Jack and Sam constituted a unit upon which I impinged only peripherally, being concerned with my own important feminine matters and friends. Jack was wiry, daring, very competitive (the leader in climbing to the ridgepole of the barn, walking the fallen tree across the creek, etc.) and a dreadful tease—of Sam, not me. The teasing often erupted into fights in which I intervened on the weaker side. When Jack grew stronger than I, I stopped physical intervention and took to moral suasion. (I must have been an awful prig!) As a little boy Jack had an explosive temper. Mother said he got over it when one day the floor, on which he was banging his head in rage, turned out to be the bathroom tiles. However it happened, he was very peaceable later on and it was almost impossible to make him lose his temper.

We lived in town in winter, spent summers at the Farm. We all rode. We had a pony. Grandfather contributed a great Standard bred sorrel horse (as well as a bunch of young walnut trees and the bull for the beginning herd of Holsteins). Other people in early days at the farm gave us their ancient hunters. We swam in Crum Creek, now the Springton reservoir, played hare and hounds. Jack was best at everything, later overtaken in horsemanship by Sam and Bob.

Jack was a purely physically oriented little boy, mostly a pain in the neck to me, until he came back from summer camp, aged fifteen, before entering Princeton. His focus had changed entirely, due in large part to one of the counselors, Jim Landis, later to be the first chairman of the SEC and an intimate, long-term visitor in our house. Jack came home afire with intellectual interests (to Mother's delighted amusement inquiring whether she'd ever heard of a poet named Keats). When he went to Princeton in 1919, I was at boarding school (Father disapproved of college for his daughter and boarding school for his sons!) and we corresponded a good deal. It seems to me that our topics were largely philosophical! I got a good bit of extra education nibbling off Jack's. Our real bond was formed during the summer of 1921, when at the end of his sophomore year, he joined me in France where I'd been taking courses at the Sorbonne. It must be an example of the trust between us and our parents that we were allowed to wander about Europe together aged seventeen and just nineteen. Today, of course, parental permission wouldn't enter the picture, but at that time our contemporaries wondered at and envied our freedom. I was gung-ho for French history and Jack went along with my interest, but his chief reading was William James' *Varieties of Religious Experience* which I considered inappropriate to the occasion. However, we had a wonderful time, took a walking trip along the Normandy coast, nearly missing our boat at Le Havre, and planned to go to Edinburgh where he would study medicine and I would keep house. (Imagine a modern sister with so lowly an aim!)

If God Is Everywhere and You Can't See Him and You Can't Hear Him, Why Can't You Feel Him?

A story Mother told shows an early instance of the investigative scientific spirit. Walking down the street holding Jack's hand she found her progress impeded by Jack pausing to wave his foot out over the curb. "Jack, what *are* you doing?" "Well, Mother, if God is everywhere and you can't see Him and you can't hear Him, why can't you feel Him?"

Are you getting tired of the Gibbons? I am. But just a little more.

We must have been quite a competitive family, except for Mother who always *said* she hated competition but she was always right in there with the puzzles, the word and guessing games, everything but chess. Father taught the boys chess. The game was seldom over by dinner time, so, between courses, he whose turn came next was allowed to go back to the living room to make the move he'd been contemplating all through the roast lamb. Mother and I found this absorption rather dull. Jack almost always beat Father because, the latter said, he took so "infernally" long over his moves.

Twice that I know of Father really used his clout with Jack. At the end of his first year at medical school Jack was ready to quit and embrace a more congenial occupation, writing, for instance. But Father made a cogent case for the benefit of having an honest-to-God profession. "If you don't want to

practice it, you needn't. But you won't write worse for having it." Or some such words. The second occasion was when Jack wanted to become a research scientist, not a practicing physician. Father persuaded him that clinical experience had a place as a balance to research; later Jack was glad.

They had a loving, mutually respecting relationship. I remember evenings at the Farm after W.W.II when they would retire to the library (that room paneled and the mantle built by Father) for long sessions of talk. Father was so interested by what Jack had to tell of modern methods and Jack so admiring of Father's openness to new ideas. Although they disagreed profoundly on politics—Father was an old-fashioned Democrat and cared not for F.D.R.—they understood one another on that ground of being which is the basis of trust and affection.

Whew! Are you still with me?

Now, on re-reading your January letter I see you would also like some information of Father's background beyond what you have.

His first Gibbon forebears came to Philadelphia from Wiltshire, England in 1684. They were named (prophetically) John and Margery and they spelled their surname "Gibbons." The "s" was dropped five generations later by Dr. John Heysham Gibbon(s), born in 1795, Father's grandfather. *His* father, John Hannum Gibbons, M.D. was the first doctor in the direct line of five to Jack. In addition, through his grandmother, Father had a great, great, great grandfather, Dr. John Lardner, "physician of London."

At the risk of boring you, I enclose an account written by Father's only brother, Robert, which gives some of the feel of their youth. It's easier for me than copying the significant bits! John Flick's paper, also enclosed, gives some idea of Father's personality—so gay, so cheerful, so confidence-inspiring.

I hope you don't feel swamped with this and that it may give something of what you want.

Good luck: Best to you and Myrtie.

Marjorie

April 28, 1979 Media, Pennsylvania

It is fortunate that Marjorie's account of Jack's younger years precedes my attempt to describe him later in life, for if there were one thing which characterized him as an adult it was the retention of his boyish imagination and enthusiasm, his competitiveness, his indulgence in periods of complete abandon and of quiet reflection.

Jack's Close Friends Were Attractive, Were Doers and They Had Something to Give. . .

It is difficult for me to know how and where to begin, how to describe such a unique personality. Memories come back so alive, so profusely, the difficulty is one of exclusion rather than of selection. The task is made even harder by realizing full well that Jack was a very different person both to many who knew him and to the many who only had a glimpse of him as he passed by.

He had many friends, but far fewer than the number who wished they had been included in that privileged group. He was fond of people but not all of them. Those whom he considered stale, stuffy, or uninteresting had no chance of joining his circle of intimates. His life was too full to allow time for those who brought with them only what he considered run-of-the-mill attributes. He would have made a poor salesman or politician. He was certainly no hail-fellow-well-met who wanted to charm and embrace all who came within his reach. To "belong" to Jack one had to have something which appealed to him, in expression, in manner, in what he was doing, in the things for which he stood. His close friends included not only surgeons from home and abroad, but also physicians in various other specialities. They included publishers, writers, social workers, professors in the humanities, holders of public office, diplomats, people in widely different walks of life. In Jack's opinion those who comprised this diverse group had certain characteristics in common; they were attractive, they were doers, and they had something to give. I have wondered time and again how I was lucky enough to be included.

He understood clearly that the qualities he admired were not always evident from the first, and some who felt rejected at the beginning later became his warm companions. Those who met him and never gained that friendship tended to consider him cold, distant, detached. The term they used most often to describe him was "impatient." Some thought him brutally frank, and with some justification. He could make remarks that were cruelly sharp, and although this happened rarely, those to whom they were directed never forgot them. If he were just not interested his natural reserve seemed to turn him away, to make people feel that they were being pushed aside, as in a way, they were.

I have tried without satisfaction to sense the feeling of his professional colleagues who never knew him, who watched him preside over meetings, who heard him report his experimental and clinical work, who listened to him discuss the presentations of others. I imagine they admired him and regarded him as one who stood so tall in world surgery that he was simply out of their reach. Some have described his dignified conduct as regal.

I began by remarking that Jack's personality was unique. As a matter of fact he had two somewhat different but overlapping personalities, one entirely personal, the other strictly professional. Let us start with the former. After much deliberation I have per-

suaded myself that this side of Jack can best be pictured at the farm, for the farm was home, and it was here that he could shed some of his responsibilities and be himself, unadorned and unburdened, take off his jacket and relax. He loved that beautiful old place, the ancient pre-revolutionary stone home, the big white house across from the tennis court where Marjorie and Winnie lived, the orchard, the vegetable and the flower gardens, the sheep, the soothing waters of the lake alongside, the old barn where he had played as a child.

Spend a weekend, if you will, at the farm with my wife and me. We turn into the little roadway and drive up beside the house. Jack and his attractive wife, Mary, or Maly as everyone called her, are expecting us and walk over to greet us. I feel the warm, firm grip of his handshake. It tightens—a gesture reserved for those close to him. I look up to his face for he is much taller than I and I see his baldish head glistening in the evening sunset, his pale blue eyes take on a special sheen with twinkles appearing at the corners, his thin lips spread in a gentle smile which slowly moves across his face. He helps us upstairs with the luggage and disappears. Showing us our familiar bedroom and bath, the towels, cupboards, and things of that sort is Maly's responsibility. Let us skip the dinner and the pleasant after-dinner conversation lounging about the living room, perhaps with a brandy in hand.

Morning has arrived and we are all in the kitchen, each carrying out a little task and talking constantly while doing it. One is frying the bacon or scrapple, another cooking eggs, still another making toast or warming English muffins, and the fourth brewing coffee and setting the table. The kitchen is Maly's, but I have the distinct notion the idea is Jack's. We walk into the dining room brightened by the sun streaming through the east windows and sit down, not to a simple breakfast, but to a festive occasion, full of animated conversation. At the head of the table sits Jack, his ruddy face and amiable smile reflecting his satisfaction with the beginning of another happy day with his wife and friends. We clear the dishes and Jack and I leave the ladies to their duties.

He suggests a walk about the farm. He wants me to see the first apples turning red. We stop by the fig trees beyond the brick fence which encloses Maly's rose garden. He explains how the limbs must be bent over, stapled to the ground in the fall and covered with hay so they can stand the winter's cold and bear fruit again in season. The remodeled chicken houses must be inspected, and we must pause a moment to drink in the beauty of the adjoining reservoir-lake. We pass the runs for the sheep-dipping and a flashback brings back just such a ceremony when the laughter must have ascended to the heavens as we pulled and pushed the slippery, rebellious animals—so different from the quiet herd munching grass nearby. We walk by the barn and into the house. The ladies have finished the kitchen chores and are upstairs.

Jack Had a Good Sense of Humor, Showing It in a Thousand Ways, But Not as Many Do. . .

We are standing by the windows looking out over the lawn. There is something on his mind which he wants to share. His face reflects a sadness within and he tells me about a family matter which disturbs him greatly and about which there is little he can do, quietly, seriously, frankly. He asks no questions; he just wants his friend to know. As suddenly as it begins, it ends. A change in mood occurs as abruptly as a windowshade might be raised to let the sunlight in. A smile comes back and he says, "Let's get the court in shape and play some tennis."

We sweep and roll the court and consider it ready. Our wives join us and we play, play to win, but play for fun. Jack has not lost the competitiveness his sister wrote about, but his natural, gentlemanly manner prevents him from expressing disappointment or anger with a poor shot. Neither does he fail to pay a compliment when it is due. The game is over and we sit and rest for a while before returning for a shower and other clothes.

The following day has come and more guests have arrived, his close friend and admirer, Clarence Crafoord from Stockholm, friends of long standing who have returned from Thailand, another couple from a suburb nearby. It is afternoon and we are sitting by the pool. We have already removed the leaves which have fallen into it and Jack has led Clarence and me into the spring house to test the temperature of the water which feeds the pool. It is satisfactorily cool according to Jack and Clarence, icy to me. The others are sitting at one end and Jack is walking up and down getting orders for drinks and passing them out, a pleasant remark accompanying each. Jack is now playing one of his favorite roles; he is host and he does it to perfection, easily and graciously. One is impressed with how much he is enjoing it all. Clarence gets up without a word, dives in and swims a length or two. Jack follows, and then I, frankly numb when I climb out at the other end. Another round of drinks and we walk up the arbor-covered stone pathway past the boxwood his father planted to the house, and get ready for the evening.

Such are bits and pieces of a weekend at the farm, and such are glimpses of Jack in an atmosphere dear to him.

Jack had a good sense of humor despite his natural reserve and dignity. He showed it in a thousand and one ways but not in the manner many do. His laughter was genuine but subdued, never boisterous. If he ever told a joke I did not hear it.

His concern with causes has been mentioned and his interest in persons who espoused those he considered wise and just. This preoccupation with causes was broadly based and included all phases of activity, political, professional, educational, economic, social, humanitarian, everything. Although similar beliefs with regard to such matters tended to draw persons to him, differences of opinion did not necessarily place them at a distance. Indeed, such divergence of thought was present among those closest to him. He was a political liberal; his father was not, and their relationship was one of love and mutual respect. One evening as we were entering a very conservative Philadelphia club he chuckled out loud and said, "They would never let me put my foot inside the door if my father were not a member and if we were not attending the Society's banquet." He was not tolerant of injustice, however, and spoke with disdain about those he felt stood for it, disdain but not anger. Marjorie was right when she wrote that he lost his hot temper as he grew out of boyhood.

No one could doubt his capacity to love deeply. No one who was ever present on such an occasion will ever forget it—Maly at the piano, Jack, the four young children and friends standing about, singing enthusiastically, Jack glancing from one to another, proud, loving, contented. Nor can one fail to remember how, as they sat with others at the banquet table, his love and esteem for her seemed to glow as Maly, naturally, effortlessly, and unconsciously, invariably became the center of attention.

As has been mentioned, Jack knew sorrow, too, as is true of us all. He could share it, but he never seemed to harbor it. Certainly he never dwelt upon it. How long it stayed within, one did not know. Marjorie wrote of his deep love for his parents. He came to Indianapolis a few days after his father died to stay with us and fulfill a promise to serve as visiting professor. A telephone call told him of his mother's sudden illness and anticipated death. "Mother is very ill. I must leave at once," he said. Those few words and the sadness registered on his face told it all.

Jack once had the impulse to drop medicine and pursue another course, writing perhaps, but he could not have been a more interested and devoted surgeon. When he was invalided home from the Pacific during the latter part of World War II and was made chief of the surgical service in a hospital where I was in charge of a large specialized treatment center he wasted no time in looking over the entire facility. The last spot on our tour was his office. The desk was piled high with records. "What are these?" he asked. "Patient records," I replied. "Your predecessor spent hours every day and night verifying their completeness." "I'm not going to spend my time in this office. I am going to run the service and treat patients," he said. "Why not?" was my comment. "What can happen, and which is the more important?" He did what he said he would. He supervised the service efficiently, operated daily, made rounds, conducted interesting, challenging seminars and conferences. He was a sympathetic, helpful, stimulating, no-nonsense colleague, not a lofty officer-in-charge.

He Was a Sympathetic, Helpful, Stimulating Colleague, Not a Lofty Officer-in-Charge. . .

It was the same in civilian life with everything he did. He edited a highly regarded surgical journal unobtrusively, but efficiently, with no harsh hurry-up reminders to his editorial staff, and no delay in having the material ready for the publisher. He served on boards, committees, and councils in a polite, business-like manner, asking pertinent questions, making wise comments, getting the matters under consideration settled on time, and leaving his coworkers in good humor and with admiration for his ways of doing things. So it was when he presided over the meetings of surgical societies and he did so frequently for he was elected president of almost all of them. I have known no one more interested in the bright young surgeon and his welfare and cannot count the times he asked whether we were overlooking someone who should be put up for membership in one surgical association or another. I know quite a few who owe their proposal for fellowship to him and not to their own department chairman. Indeed, I know some who feel they owe their entire professional career to him.

Jack took his position as Samuel D. Gross Professor of Surgery and Chairman of the Department seriously, and in a quiet but determined way attempted with success to raise the image of the department, to improve student instruction and resident training, and to develop an ongoing, productive investigative program. He did everything possible to instill into all for whom he was responsible the obligation to think critically but open-mindedly, to develop, if possible, a bent for research and a capability for it, to render patient care well and with kindliness and understanding. He never used his prestigious position for developing a large personal income. One day we sat in his office discussing departmental plans. The question of the acquisition and utilization of funds arose. He volunteered what he himself earned. It was so remarkably little the precise figure has stuck with me. He would be surprised and disturbed if he knew that promising young surgeons today might refuse a good position if it paid only two or three times as much as he, as chairman, considered adequate for his own remuneration. Funds were to be used primarily for the general welfare of the department and

making money should not be one of the principal aspirations of the university surgeon.

One walking through his wards with him was impressed with his courtesy to the patients, his interest in his residents and students. It was apparent that he was more concerned with the way his trainees and students thought than with the factual information they had acquired, although he appropriately stressed the importance of the latter. He was not as intimate with them as are some in similar positions, nor was he difficult to approach. He welcomed questions, differences of opinions, and especially ideas. He was never the overbearing Geheimrath.

In his laboratories he spoke more of plans and hopes than of accomplishments, and he was more interested in learning from his visitors what they were doing than to tell what he had done. He shared with them, if they inquired, and they always did, his progress, his troubles, his disappointments, and future plans. Never was he the least bit concerned that this frank disclosure might result in their gain and possibly in his loss. To reach the goal was the issue, not who reached it first.

Jack received many awards, honors, honorary degrees; he deserved them all and more. He bore these accolades with such humility and grace one would never have known they were his. If one asked him about a trip during which he was given a distinguished award he would be apt to say only that everything was very pleasant—no more.

I made the comment that Jack was a somewhat different person professionally and nonprofessionally. In the former role he was headed down a straight path with little or no wandering along the byways; in the latter he was free to move with the tides, and he did.

Once he had brought the heart-lung machine to a standard which satisfied him and was able to demonstrate that its use permitted careful, unhurried open heart surgery, he was ready to pursue other objectives. He had been entirely serious a little later in 1967 when he wrote the last sentence of the preface of the second edition of his book: "This book is my last effort in the field of medicine, and it gives me great satisfaction, as I say 'Hail and Farewell,' to know that future editions of this book lie in the fine, capable hands of my coeditors, Sabiston and Spencer." He retired and spent his remaining years on the farm with family and friends doing those things he loved to do, reading, gardening, swimming,

To Reach the Goal Was the Issue—Not Who Reached It First. . .

playing tennis, attending to civic obligations, traveling—and painting. For some years painting, almost exclusively portrait painting, had intrigued him, and during holidays at Manchester, Maly's father, Mr. Charles Hopkinson, one of our most distinguished portrait painters, had inspired him and helped him. After his retirement his interest became nearly all-absorbing, much more than a hobby, almost an obsession. His work steadily improved until it became unusually good for an amateur. He even received a few commissions and those who authorized them were highly pleased. He converted a back room in the spacious old home into a studio and spent hours in it. He had never inquired of visiting friends whether they thought his research was going well. In contrast, one never went into the studio with him without being questioned. Was the face too pale? Were the eyes just right? Should the hands be made more slender? He loved what he was doing and was obviously pleased with his progress.

As is true of too many doctors, he had little concern for his own health. When he was nearing the completion of his *Surgery of the Chest* he called his associate, Rudolph Camishion, to his office and said something to this effect, "Rudy, in a month I shall be finished with this book. When it is done I want you to get an x-ray of my chest and take out my lung." When his shocked young colleague asked why in the world he would make such a request, Jack simply told him he had cancer of the lung, that he had been coughing for some weeks, had no evidence of infection, and that the diagnosis was obvious. Unbelieving, Rudy asked him why he didn't do himself what he would insist any of his patients should do, have an x-ray immediately and settle the issue without delay. To this he replied that he would wait until the book was finished and do it then. A month afterward, the volume was off to the publisher, the x-ray was made, and the lung appeared perfectly normal. Some years later he had a myocardial infarction from which he made a good recovery, and not long afterward was able to resume all his normal activities. In the spring of 1972 we were at a surgical meeting and used a free afternoon to play doubles. Throughout the game he insisted he was not the least bit tired or uncomfortable. Quite a while after the game he had a mild and transient episode of angina. Upon my return home I wrote to him immediately and asked whether he would not consider consulting his cardiologist and getting his opinion about a coronary arteriogram. That was the only letter I ever wrote him that went unanswered—and he had no arteriogram. He died suddenly in February, 1973, happily playing tennis—the sort of death he would have chosen.

What about Jack's varied interests, poetry, writing, surgery, research, sports, and all the others? Are they in harmony with one whose civic commitment and concern for social welfare played a significant role in his receiv-

ing the coveted Philadelphia Award? Are they compatible with the uncomplaining soldier sent home from the Pacific on a stretcher in excruciating pain and his enthusiastic resumption of duty as soon as it was physically possible? Do they go along with a career as teacher, investigator and surgeon, so dedicated he was deservedly rewarded with honors outside the reach of all but a select few? Are they in accord with one so earnest in his research that he would spend nearly twenty years developing and perfecting a heart-lung machine until it was capable of permitting him to perform the first successful open heart operation during which the function of the heart and lungs was taken over by an extracorporeal device—research carried out despite the obligations of teaching and practice, the handicap of inadequate financial and engineering support until the last few years, the interruption of a long period of military service? Do they help us understand why, after working so long and hard to accomplish this objective, he would give up his surgical career only a few years after he reached this goal and had expanded operative surgery in an almost inconceivably broad manner? Do they explain his taking up portrait painting during his retirement with the same persistance and dedication which had characterized his surgical research? I believe it is all understandable and fits together.

Poetry didn't make Jack a better surgeon or investigator, but the pleasure he derived from the humanities, sports, and other interests undoubtedly contributed greatly to the happy life he had and gave him a broad perspective of what it was all about. His relentless pursuit of excellence from childhood and his determination to win help us understand his work and the innovative perseverance which brought it to a successful conclusion. It is likely that these attributes tell us why, having won, he could turn to other tasks and pastimes. The heart-lung machine was developed to his satisfaction. Operations could be carried out in a precise and unhurried manner within the open heart. Others could and would carry on. Life's habits had taught him to persist until an objective was reached and then to move ahead. While he was on the crest of the surgical wave was an appropriate time to bring his professional work to a close, to enjoy the farm and all it had to offer, and to take up seriously his deferred ambition to paint. He continued the pattern of life he had established for himself as a youngster. His many interests, his likes and dislikes, his changing whims, fancies and plans were the frosting that made his personality what it appeared to be, while underneath there was always a driving force which set the course, gave him the energy and determination to see it through, and once done, to make him free to take another tack and pursue it until yet another goal was reached.

He Had Learned to Persist Until an Objective Was Reached, Then to Move Ahead. . .

Summary

Jack's untimely death brought to an end the life of a man respected and admired by everyone, loved intensely by his family and friends, a man whose innovative contributions extended the boundaries of surgery as have few others. These contributions will be remembered. It is hoped that this attempted character sketch, based upon the vivid memories of his beloved sister and those of a colleague and companion who enjoyed an unusually deep-seated friendship with him will help keep alive the unique personality of a man to whom we owe so much, and will help us understand why he accomplished what he did.

REFERENCES

1. Shumacker HB Jr: John Heysham Gibbon Jr., 1903-1973. A Biographical Memoir. Washington, DC, 1982, The National Academy Press.



AUXILIARY REPORT

Muriel Osborne (Mrs. John)
ISMA Auxiliary President 1985-86

An outstanding ISMA convention has been planned for you in South Bend next month (Nov. 14-17). You may have read about it in your monthly newsletter, *ISMA Reports*, and there's more in this issue of INDIANA MEDICINE. Please encourage your spouse to accompany you. It will be a convention filled with educational and entertaining events for both of you.

It is a year of many firsts for the ISMA-A. We will not be having a board meeting during the convention. We will be attending the General Scientific Session ("Physicians and Stress") with our spouses. At the convention center there will be a hospitality area from 8 a.m. to 5 p.m. each day of the meeting. This area will provide a place for anyone attending the meeting to take a break or have a snack. The AMA-ERF and Health Project slide shows will provide entertainment for those who are interested. "Helina" will be in the adjacent area for those who wish to shop.

Helina Silverman, the wife of a physician, is from Ann Arbor, Mich. Their daughter is an importer. Helina offers a variety of items ranging from silk blouses to jewelry of precious and semi-precious stones. She pays all of her own expenses, returns 20% of each sale to AMA-ERF, and at the end of the year pays the sales tax as her contribution to AMA-ERF.

We encourage everyone to attend the IMPAC luncheon on Friday. The guest speaker will be Congressman Bob McEwen (R-Ohio). That evening there will be the General Membership Reception, followed by a Woody Herman concert, topped off by a "Meet the Artist" party and late night reception-dessert.



Enjoying the sunshine on the grounds of the Tippecanoe Place Restaurant (background) are, from left, Muriel Osborne, Lucreta Allen and Ellaine Cox. The restaurant is the former Studebaker family mansion.

Saturday morning, while your meetings continue, we invite your spouse to go on a tour of St. Mary's College and the University of Notre Dame. Tippecanoe Place Restaurant, formerly the Studebaker family mansion, has been reserved for us in its entirety for our luncheon and a Victorian style show, followed by a tour of the mansion. We will return by bus to the Marriott in time to get ready for the President's Reception and Dinner-Dance that evening in the Great Hall of the Century Center.

The Health and Life Style Center of Memorial Hospital and Pro Health of the St. Joseph Medical Center are full of fitness centers, all within a short walk of the Marriott and Century Center. These facilities are available for use by you and your spouse. You are invited to bring your racquetball gear, swim suit and exercise clothing. For tennis, the Racquet Club is only a short drive away.

The St. Joseph County Medical Society and Auxiliary invite you to South Bend to share the fruition of months of planning by the Commission on Convention Arrangements and by the ISMA staff.—*Ellaine Cox and Lucreta Allen, co-chairmen, Women's Activities ISMA 1985 Convention*



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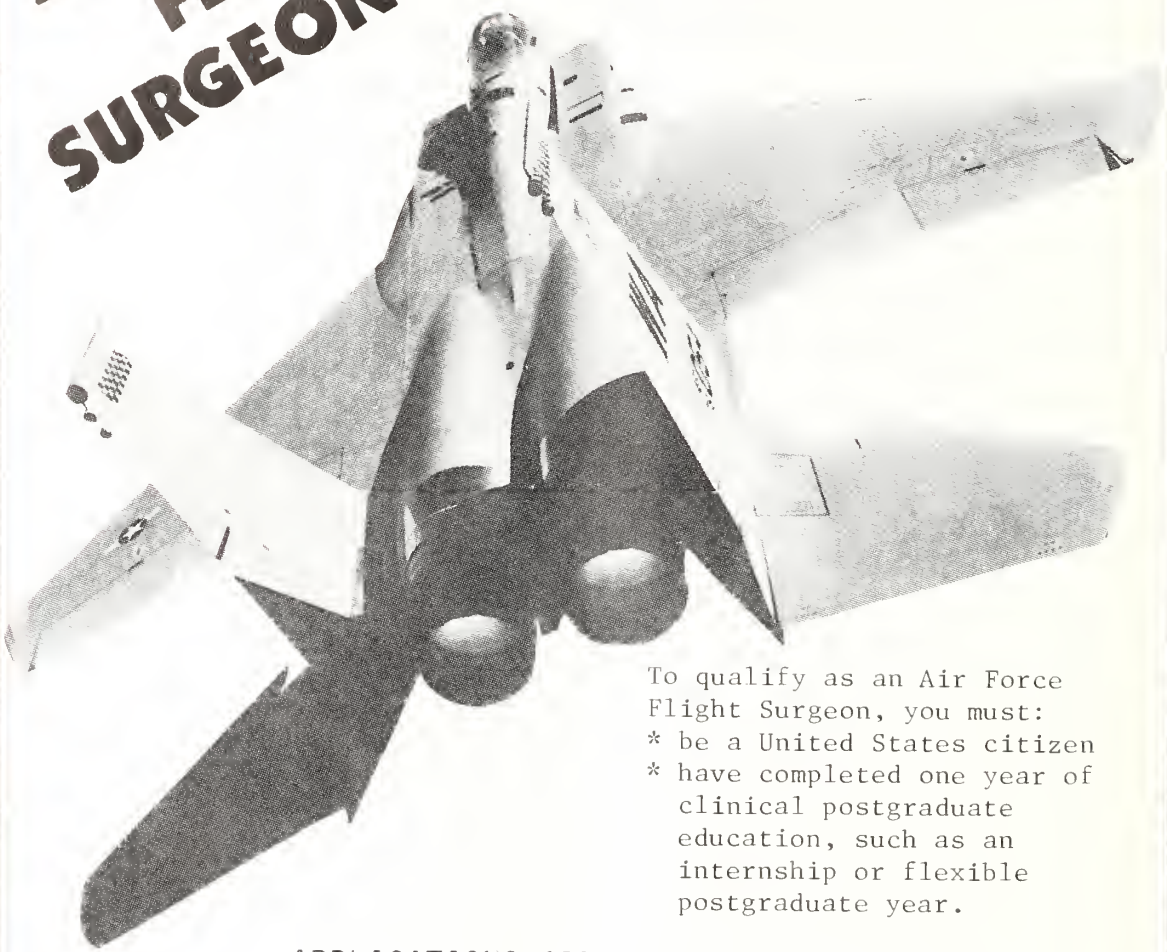
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CME QUIZ

TO OBTAIN ONE HOUR OF CATEGORY 1 AMA CME CREDIT, answer the following questions by circling the correct answer on the answer sheet below. Complete and clip the application form and mail it to: Indiana University School of Medicine, CME Division, Fesler Hall 224, 1120 South Dr., Indianapolis 46223.

Child with a Single Seizure

CONTINUED FROM PAGES 873-878

1. The frequency of single afebrile seizures in childhood is:
   a. Less than 2 per 1000
   b. Between 4 and 20 per 1000
   c. 40 per 1000
   d. 10 per 100

2. The one laboratory test which should be performed in all children with a first seizure is a:
   a. CBC
   b. Glucose
   c. BUN
   d. T3 and T4

3. The frequency of seizures during meningitis is:
   a. Less than 5%
   b. 10-20%
   c. 30-40%
   d. Greater than 70%

4. Drugs which have been associated with seizures include:
   a. Theophylline
   b. Amphetamine
   c. Phenopropanolamine
   d. All of the above

5. In addition to a blood sugar, the laboratory data obtained for a child with a first seizure should always include:
   a. Sodium and potassium
   b. Calcium
   c. Amino acids
   d. Lumbar puncture

6. An abnormality on the CT scan is most likely in children with:
   a. Febrile seizures
   b. Classic absence seizures
   c. Partial elementary seizures
   d. Seizures associated with hypoglycemia

7. Epileptiform activity may be seen in what percent of EEGs in individuals without seizures?
   a. Never
   b. 0.2-0.5%
   c. 2-3%
   d. 5-10%

8. The recurrence risk may be increased by:
   a. A history of a prior neurologic insult
   b. An abnormality on neurologic exam
   c. A family history of epilepsy
   d. All of the above

9. The recurrence risk is increased if the EEG shows:
   a. Focal slowing
   b. Diffuse slowing
   c. Focal or generalized spikes
   d. There is no correlation of EEG with recurrence

10. The main factor which will distinguish breath-holding spells and syncope from seizures is:
    a. The events which precede the episode
    b. The duration of the episode
    c. The presence of clonic activity
    d. The presence of postictal lethargy or confusion

SEPTEMBER CME QUIZ Answers

Following are the answers to the CME quiz that appeared in the September 1985 issue: "The Chest Radiograph as a Screening Tool: A Reappraisal," by William M. Tierney, M.D., and Robert S. Dittus, M.D.

1. a	6. d
2. d	7. c
3. c	8. c
4. a	9. d
5. b	10. d

Answer sheet for Quiz: (Single Seizure. . .)

1. a b c d	6. a b c d
2. a b c d	7. a b c d
3. a b c d	8. a b c d
4. a b c d	9. a b c d
5. a b c d	10. a b c d

I wish to apply for one hour of category 1 AMA Continuing Medical Education credit through the I.U. School of Medicine. I have read the article and answered the quiz on the answer sheet above. I understand that my answer sheet will be graded confidentially, at no cost to me, and that notification of my successful completion of the quiz (80% of the questions answered correctly) will be directed to me for my application for the Physician's Recognition Award of the American Medical Association. I also understand that if I do not answer 80% of the questions correctly, I will not be advised of my score but the answers will be published in the next issue of INDIANA MEDICINE.

Name (please print or type)

Address

Identification number (found above your name on mailing label)

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To be eligible for this month's quiz, send your completed, signed application before Nov. 10, 1985 to the address appearing at the top of this page.

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fore prescribing, see complete prescribing information in SK&F CO. erature or *PDR*. The following is a brief summary.

WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

ntraIndications: Concomitant use with other potassium-sparing agents ch as spironolactone or amiloride. Further use in anuria, progressive al or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum tassium. Hypersensitivity to either component or other sulfonamide-rived drugs.

rnings: Do not use potassium supplements, dietary or otherwise, unless pokalemia develops or dietary intake of potassium is markedly impaired. supplementary potassium is needed, potassium tablets should not be ed. Hyperkalemia can occur, and has been associated with cardiac irregu-ities. It is more likely in the severely ill, with urine volume less than e liter/day, the elderly and diabetics with suspected or confirmed renal ufficiency. Periodically, serum K^+ levels should be determined. If hyper-emia develops, substitute a thiazide alone, restrict K^+ intake. **Asso-ted widened QRS complex or arrhythmia requires prompt additional rapy.** Thiazides cross the placental barrier and appear in cord blood. e in pregnancy requires weighing anticipated benefits against possible zards, including fetal or neonatal jaundice, thrombocytopenia, other verse reactions seen in adults. Thiazides appear and triamterene may pear in breast milk. If their use is essential, the patient should stop sing. Adequate information on use in children is not available. Sensitivity ctions may occur in patients with or without a history of allergy or nchial asthma. Possible exacerbation or activation of systemic lupus thematosus has been reported with thiazide diuretics.

ecautions: The bioavailability of the hydrochlorothiazide component of azide' is about 50% of the bioavailability of the single entity. Theoreti-ly, a patient transferred from the single entities of Dyrenium (triamterene, &F CO.) and hydrochlorothiazide may show an increase in blood pressure fluid retention. Similarly, it is also possible that the lesser hydro-orothiazide bioavailability could lead to increased serum potassium levels. wever, extensive clinical experience with 'Dyazide' suggests that these nditions have not been commonly observed in clinical practice. Do iodic serum electrolyte determinations (particularly important in patients niting excessively or receiving parenteral fluids, and during concurrent with amphotericin B or corticosteroids or corticotropin (ACTH)). iodic BUN and serum creatinine determinations should be made, pecially in the elderly, diabetics or those with suspected or confirmed al insufficiency. Cumulative effects of the drug may develop in patients h impaired renal function. Thiazides should be used with caution in tients with impaired hepatic function. They can precipitate coma in tients with severe liver disease. Observe regularly for possible blood scrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias ve been reported in patients receiving triamterene, and leukopenia, mbocytopenia, agranulocytosis, and aplastic and hemolytic anemia ve been reported with thiazides. Thiazides may cause manifestation of ent diabetes mellitus. The effects of oral anticoagulants may be creased when used concurrently with hydrochlorothiazide; dosage adjust-nts may be necessary. Clinically insignificant reductions in arterial ponsiveness to norepinephrine have been reported. Thiazides have also en shown to increase the paralyzing effect of nondepolarizing muscle axants such as tubocurarine. Triamterene is a weak folic acid antagonist. periodic blood studies in cirrhotics with splenomegaly. Antihypertensive ects may be enhanced in post-sympathectomy patients. Use cautiously surgical patients. Triamterene has been found in renal stones in asso-tion with the other usual calculus components. Therefore, 'Dyazide' uld be used with caution in patients with histories of stone formation. ew occurrences of acute renal failure have been reported in patients on azide' when treated with indomethacin. Therefore, caution is advised in ministering nonsteroidal anti-inflammatory agents with 'Dyazide'. The owing may occur: transient elevated BUN or creatinine or both, hyper-cemia and glycosuria (diabetic insulin requirements may be altered), eruricemia and gout, digitalis intoxication (in hypokalemia), decreasing ali reserve with possible metabolic acidosis. 'Dyazide' interferes with prescent measurement of quinidine. Hypokalemia is uncommon with azide', but should it develop, corrective measures should be taken such potassium supplementation or increased dietary intake of potassium-n foods. Corrective measures should be instituted cautiously and serum assium levels determined. Discontinue corrective measures and azide' should laboratory values reveal elevated serum potassium. oride deficit may occur as well as dilutional hyponatremia. Concurrent with chlorpropamide may increase the risk of severe hyponatremia. rum PBI levels may decrease without signs of thyroid disturbance. Cal-m excretion is decreased by thiazides. 'Dyazide' should be withdrawn ore conducting tests for parathyroid function.

azides may add to or potentiate the action of other antihypertensive gs.

retics reduce renal clearance of lithium and increase the risk of lithium icity

verse Reactions: Muscle cramps, weakness, dizziness, headache, dry uth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermat-gical conditions; nausea and vomiting, diarrhea, constipation, other strointestinal disturbances; postural hypotension (may be aggravated by ohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, rus, pancreatitis, xanthopsia and respiratory distress including pneu-nitis and pulmonary edema, transient blurred vision, sialadenitis, and tigo have occurred with thiazides alone. Triamterene has been found in al stones in association with other usual calculus components. Rare idents of acute interstitial nephritis have been reported. Impotence has en reported in a few patients on 'Dyazide', although a causal relationship not been established.

pplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 00 capsules; Single Unit Packages (unit-dose) of 100 (intended for stitutional use only); in Patient-Pak™ unit-of-use bottles of 100.

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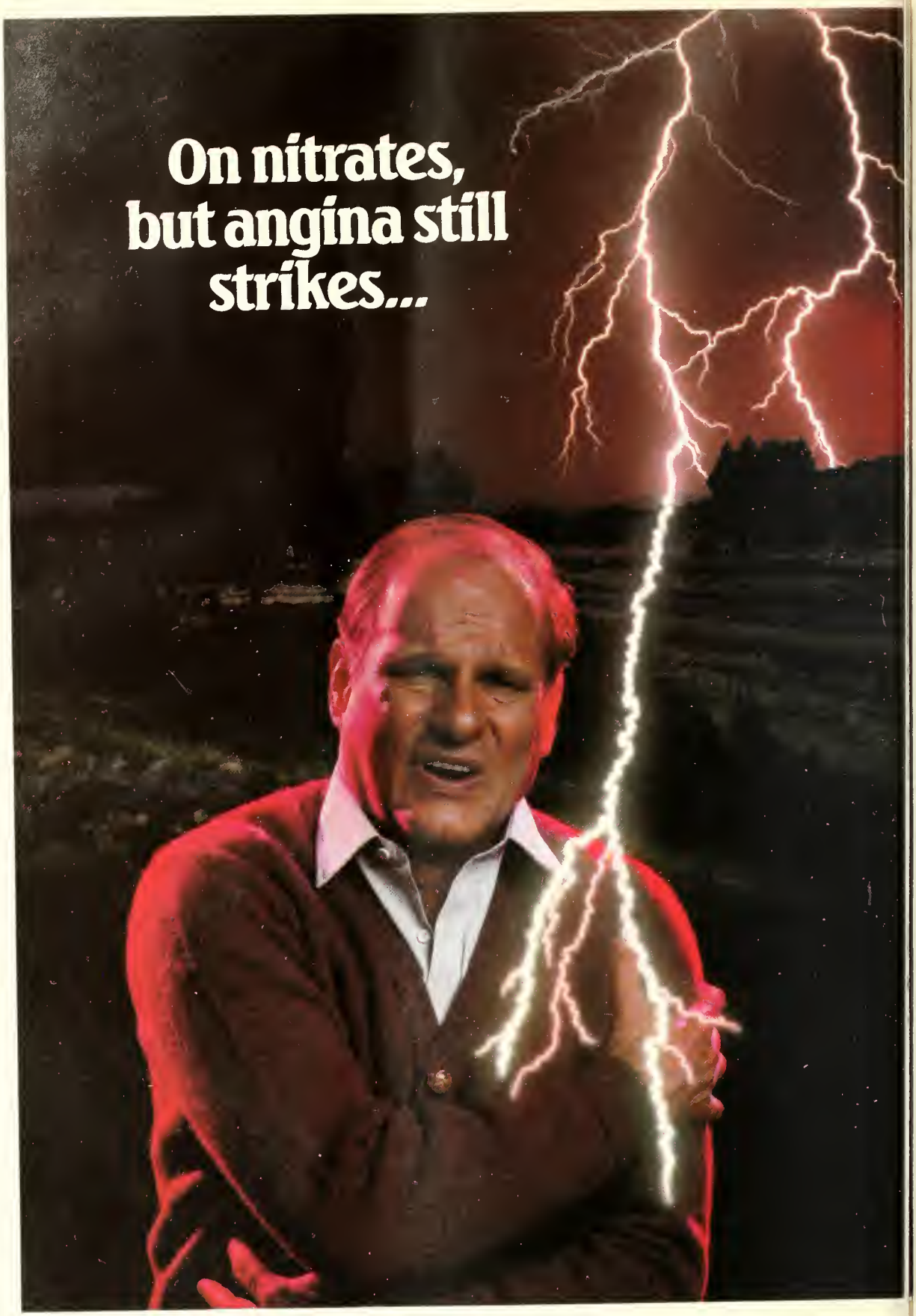


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Contraindications: Severe left ventricular dysfunction (see *Warnings),* hypotension (systolic pressure < 90 mm Hg) or cardiogenic shock, sick sinus syndrome (except in patients with a functioning artificial ventricular pacemaker), 2nd- or 3rd-degree AV block. **Warnings:** ISOPTIN should be avoided in patients with severe left ventricular dysfunction (e.g., ejection fraction < 30% or moderate to severe symptoms of cardiac failure) and in patients with any degree of ventricular dysfunction if they are receiving a beta blocker (See *Precautions.)* Patients with milder ventricular dysfunction should, if possible, be controlled with optimum doses of digitalis and/or diuretics before ISOPTIN is used (Note interactions with digoxin under *Precautions.*) ISOPTIN may occasionally produce hypotension (usually asymptomatic, orthostatic, mild and controlled by decrease in ISOPTIN dose). Elevations of transaminases with and without concomitant elevations in alkaline phosphatase and bilirubin have been reported. Such elevations may disappear even with continued treatment, however, four cases of hepatocellular injury by verapamil have been proven by rechallenge. Periodic monitoring of liver function is prudent during verapamil therapy. Patients with atrial flutter or fibrillation and an accessory AV pathway (e.g. W-P-W or L-G-L syndromes) may develop increased antegrade conduction across the aberrant pathway bypassing the AV node, producing a very rapid ventricular response after receiving ISOPTIN (or digitalis). Treatment is usually D.C.-cardioversion, which has been used safely and effectively after ISOPTIN. Because of verapamil's effect on AV conduction and the SA node, 1° AV block and transient bradycardia may occur. High grade block, however, has been infrequently observed. Marked 1° or progressive 2° or 3° AV block requires a dosage reduction or, rarely, discontinuation and institution of appropriate therapy depending upon the clinical situation. Patients with hypertrophic cardiomyopathy (IHSS) received verapamil in doses up to 720 mg/day. It must be appreciated that this group of patients had a serious disease with a high mortality rate and that most were refractory or intolerant to propranolol. A variety of serious adverse effects were seen in this group of patients including sinus bradycardia, 2° AV block, sinus arrest, pulmonary edema and/or severe hypotension. Most adverse effects responded well to dose reduction and only rarely was verapamil discontinued. **Precautions:** ISOPTIN should be given cautiously to patients with impaired hepatic function (in severe dysfunction use about 30% of the normal dose) or impaired renal function, and patients should be monitored for abnormal prolongation of the PR interval or other signs of excessive pharmacologic effects. Studies in a small number of patients suggest that concomitant use of ISOPTIN and beta blockers may be beneficial in patients with chronic stable angina. Combined therapy can also have adverse effects on cardiac function. Therefore, until further studies are completed, ISOPTIN should be used alone, if possible. If combined therapy is used, close surveillance of vital signs and clinical status should be carried out. Combined therapy with ISOPTIN and propranolol should usually be avoided in patients with AV conduction abnormalities and/or depressed left ventricular function. Chronic ISOPTIN treatment increases serum digoxin levels by 50% to 70% during the first week of therapy, which can result in digitalis toxicity. The digoxin dose should be reduced when ISOPTIN is given, and the patients should be carefully monitored to avoid over- or under-digitalization. ISOPTIN may have an additive effect on lowering blood pressure in patients receiving oral antihypertensive agents. Disopyramide should not be given within 48 hours before or 24 hours after ISOPTIN administration. Until further data are obtained, combined ISOPTIN and quinidine therapy in patients with hypertrophic cardiomyopathy should probably be avoided, since significant hypotension may result. Clinical experience with the concomitant use of ISOPTIN and short- and long-acting nitrates suggest beneficial interaction without undesirable drug interactions. Adequate animal carcinogenicity studies have not been performed. One study in rats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. *Pregnancy Category C*: There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor and delivery only if clearly needed. It is not known whether verapamil is excreted in breast milk; therefore, nursing should be discontinued during ISOPTIN use. **Adverse Reactions:** Hypotension (2.9%), peripheral edema (1.7%), AV block 3rd degree (0.8%), bradycardia. HR < 50/min (1.1%), CHF or pulmonary edema (0.9%), dizziness (3.6%), headache (1.8%), fatigue (1.1%), constipation (6.3%), nausea (1.6%), elevations of liver enzymes have been reported (See *Warnings.*) The following reactions, reported in less than 0.5%, occurred under circumstances where a causal relationship is not certain: ecchymosis, bruising, gynecomastia, psychotic symptoms, confusion, paresthesia, insomnia, somnolence, equilibrium disorder, blurred vision, syncope, muscle cramp, shakiness, claudication, hair loss, macules, spotty menstruation. **How Supplied:** ISOPTIN (verapamil HCl) is supplied in round, scored, film-coated tablets containing either 80 mg or 120 mg of verapamil hydrochloride and embossed with "ISOPTIN 80" or "ISOPTIN 120" on one side and with "KNOLL" on the reverse side. Revised August, 1984 2385

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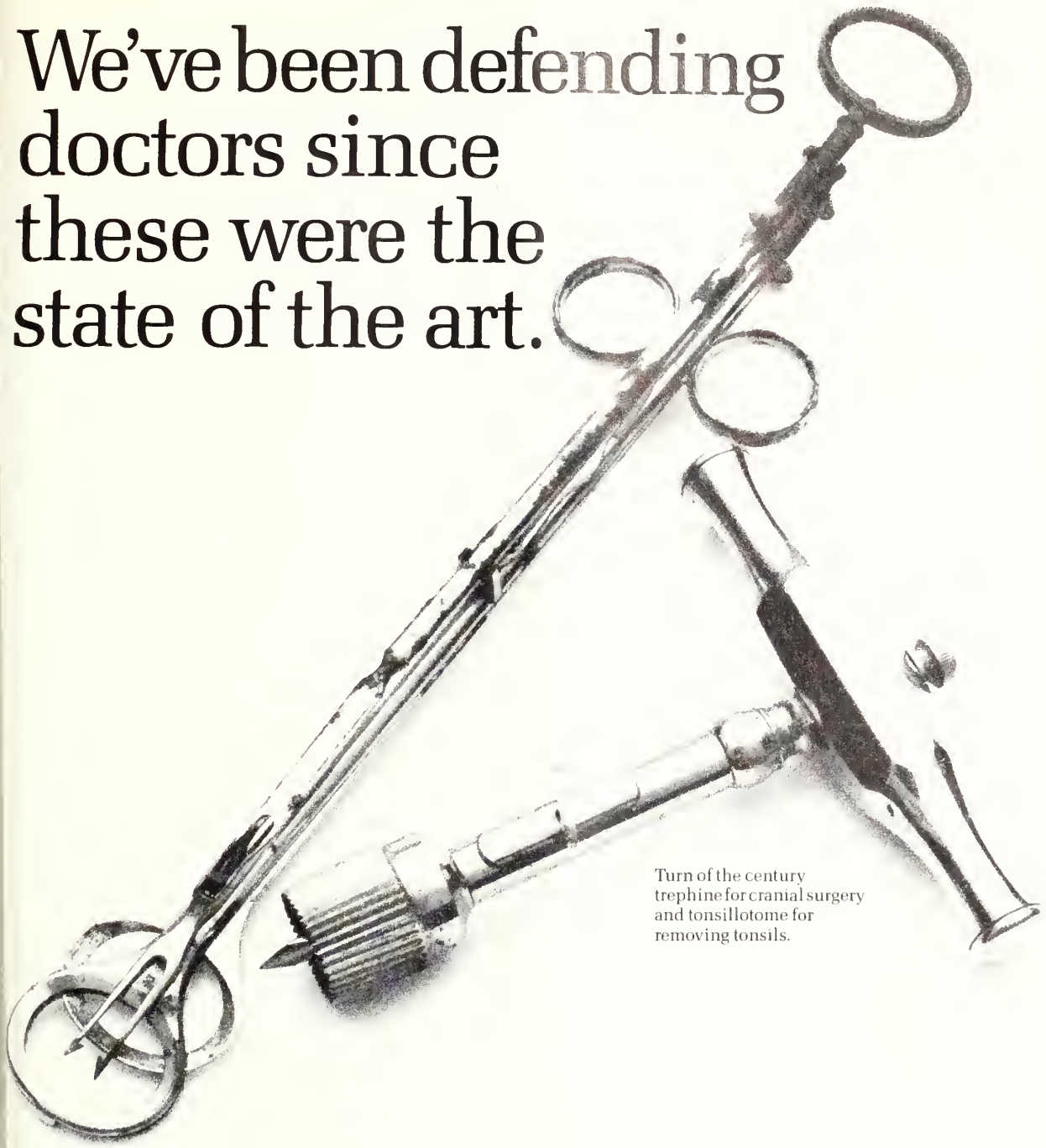
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BOOK REVIEWS

Blood Diseases of Infancy and Childhood

By Dennis R. Miller, M.D., Robert L. Baehner, M.D., and Campbell W. McMillan, M.D. 9th edition. Copyright 1984, C. V. Mosby Co., St. Louis, Mo. 972 pages, $73.95.

As the title implies, this well known text, now in its fifth edition since 1960, deals with diseases of the blood in children. Because of its comprehensive and scholarly coverage physicians practicing adult medicine will find it a useful source of guidance also. The chief editors are professors of pediatrics, whose research has been primarily in blood disorders. Ten other authors have contributed chapters on problems in which they are experts.

The book is divided into four main sections: 1) general topics such as origin and development of blood cells; maternal-fetal interactions, normal values of blood components in the perinatal period, infancy, childhood and adolescence; blood groups and blood component transfusions; 2) disorders primarily involving red blood cells; 3) disorders due chiefly to aberrations of white blood cells; 4) disorders of hemostasis.

In fields in which older hematology texts gave only scanty space because research in them was still giving incomplete answers, this volume gives very helpful updates. These areas include molecular biology, genetics, biochemistry, cell metabolism and immunology.

The section edited by Dr. Baehner, Landen Professor of Pediatrics at Indiana University School of Medicine, may be of special interest to Indiana physicians. This section, devoted to "White Blood Cells," contains chapters on disorders of granulocyte functions; lymphocytes; hematologic malignancies—leukemia and lymphoma; acute lymphoblastic leukemia; management of leukemia and complications of treatment, metabolic complications of leukemia and lymphoma; Hodgkin disease and non-Hodgkin lymphoma; the spleen and disorders of the monocyte-macrophage system. This general schema is followed in the other divisions of the volume.

Older physicians, like this reviewer, who were constantly confronted by infectious mononucleosis in young adults, have been excited by the newer knowledge on Epstein-Barr virus described in this section. Several different antigens which have now been described for EBV may account for the great variety of clinical manifestations and complications seen in this disease—Guillian-Barre syndrome, facial nerve palsy, optic neuritis, acute psychoses, Reye syndrome and the like. Autoimmune complications include hemolytic anemia, aplastic anemia and thrombocytopenia, and immunologic dysfunction of T and B cell systems. Fatal infectious mononucleosis is rare but does occur. In 20 cases cited by Baehner nine deaths were due to neurologic manifestations, three to splenic rupture, three to secondary infection, two from unknown causes. Treatment is symptomatic. The author thinks antibiotics are seldom of benefit. Severe respiratory distress resulting from nasopharyngeal hypertrophy and severe hemolytic anemia are best treated with corticosteroids.

In the chapter on leukemia some surprising but encouraging statistics are given. Leukemia is the second leading cause of death in children under 15 years, led only by accidental deaths. There are about 7,000 new pediatric cancers each year, among which 2,500 are diagnosed as leukemia. About 2,100 of these are of the acute lymphoblastic type. The remaining 15 to 20% are scattered among the other varieties—myeloblastic, promyelocytic, megakaryoblastic, erythroleukemic and others. With the best treatment available 55 to 60% of children with the acute lymphoblastic type are still in remission after five years. It is anticipated that 85% of those achieving three to five year survival may be considered cured. With the nonlymphoblastic kinds of juvenile leukemia it is expected that not more than 25 to 30% will survive five years.

Certain population groups have a greatly enhanced likelihood of developing leukemia. These include identical twins (one in five), non-twin siblings of leukemic parents (one in 720), congenital defects such as Down syndrome, Fanconi anemia, atoxic telangiectasia, and others. Also presenting special risks are such factors as excessive exposure to radiation, polycythemia vera, ankylosing spondylitis, and others. An infectious origin for human leukemia has not been proven but animal experiments indicate that several viurses having DNA capable of integrating with cellular DNA of the infected host may play a role in initiating malignant changes in leukocytes.

In the leukemia chapters the wide range of symptoms and physical signs, depending upon the variety of organs involved, is stressed. Diagnostic measures besides careful history and physical examination include exhaustive blood cell examinations, all of which are described. Bone marrow study usually gives the most definitive information. The place of biopsy of enlarged glands, roentgenograms, immunologic tests such as those with common acute lymphoblastic leukemia antigen (CALLA), monoclonal antibody tests, HLA typing, etc. are described in detail, along with prognostic factors.

In the many pages devoted to therapy one is impressed by the complexity of the challenges facing the therapist and marvels at the progress that has been made. Complete remission must be induced as promptly as possible by one of the anti-cancer drug combinations, usually one agent of which is Prednisone. Surveillance must be maintained as the patient receives intensive supportive care depending on the variety of toxic drug effects. Relapses must be recognized and treated promptly, usually with a different combination of drugs. To attain maximally favorable results it is clear that treatment must begin as soon as leukemia is diagnosed and be administered by experienced hematologist-oncologists.

The other sections of this volume besides the leukemia chapters cited above are equally detailed and authentic. I was particularly impressed by the chapter on blood groups and blood component transfusion in the first section. One has the conviction that this is a

text that can be relied upon. What it has to say is presented clearly enough for the average primary physician to understand and use. Because of its comprehensive coverage, extensive bibliographies and reliable authorship it will be used extensively by hematologists and oncologists as well.—**Paul S. Rhoads, M.D., Richmond, Internal Medicine**

Diet-Related Diseases: The Modern Epidemic

By Stephen Seely, et al. Copyright 1985, AVI Publishing Co., Westport, Conn. 266 pages, hardcover, $35.

The authors of this interesting, well presented book include Stephen Seely, a microbiologist, David L. J. Freed, a physician immunologist, Gerald A. Silverstone, Ph.D., a chemist, and Vicky Rippere, a doctor of clinical psychology. The gentlemen are affiliated with the University of Manchester, England while Dr. Rippere works at the University of London, England.

The authors are agreed that people can suffer diseases caused or incited by foodstuffs more often than is generally recognized. The authors share a frustration that the data to prove their contention are hard to come by. This book is their attempt to assemble that data available.

In Chapter 1 the reader is reminded that some diseases—coeliac disease, dental caries and alcoholism, for example—can be seen as direct effects of nutrients while many more—such as ergotism, bovine tuberculosis, and salmonellosis—are often food borne. Then follow chapters in which are listed those diseases suspected as being food related. Also listed are the many toxins available in the food we eat. The reader is introduced to epidemiologic investigative techniques linking certain diseases to certain diets at different times in different cultures. The many untoward chemicals which enter foods during their cultivation, collection, processing, distribution, preparation and ingestion are noted.

Chapter 7 is Dr. Freed's attempt to sort out the the differences between food "allergy" and food intolerance. He reviews the history of allergy and recounts the objective immunologic tests now used in the diagnosis of allergic disease. He finds these tests inadequate to explain many cases of adverse reactions to specific foods and chemicals. One must often count on the controlled dietary trial—with all its difficulties and shortcomings. Finally, the relationship of diet with mental illness and old age are studied in chapters 8 and 9. Again the reader emerges better educated but unconvinced.

As stated, *Diet-Related Diseases* is an interesting book, well presented. Its 266 pages are easy to read and the illustrations and tables are helpful. Typographical errors are few (I found six) and the organization of the material is logical. The references are many and varied. Several were examined and one (Is migraine food allergy? Egger et al, The Lancet-(1983),2,865-9) is a good example of the problem of objectivity in studies of food "allergy." Reference #105 on page 262 cites the chapter on hypoglycemia in *Cecil's Textbook of Medicine*, 14th edition. But the same section in the 17th edition is not so friendly to Dr. Rippere's thesis. For those impatiently interested in the subject R. Parrish, M.D. and E. Webster are concise and comprehensive in their article in Medical Clinics on North America—May 1985, pages 533-46.

Many physicians, including this reviewer, are convinced that adverse chemical and/or immunologic effects of ordinary foods on certain patients are common events. The tone of this book indicates a similar conviction in British investigators. Their book lacks proof for their thesis. They accept their difficulties in finding objective markers for the perceived phenomena. And they remind their readers that James Lind's *A Treatise of the Scurvy* was published in 1753. His empirical studies prompted a British admiralty decree that all British sailors receive a daily ration of lime juice—in 1795. Ascorbic acid was identified as the missing ingredient in the scorbutic diet—in 1932.—**Thomas J. Conway, Terre Haute, Pediatrics**

Magnetic Resonance Annual 1985

Edited by Herbert Y. Kressel. Copyright 1985, Raven Press, New York, N.Y. 324 pages, with 211 illustrations, $49.50.

The first of an annual series, this book is a collection of experiences from the pantheon of diagnostic imaging. Its format is more of a collection of related essays than a continuous flow of chapters. Many of the rarer cases are anecdotal; large series have not yet been accumulated.

A spectrum of pathology is demonstrated as seen with low, medium, and high field strength sytems from premier academic sites in the United States. The book cautions that essentially every disease process can be missed by inappropriate pulse sequences, but does not elucidate the effect of varying the pulse sequences upon visualization (or lack of visualization) of pathology.

There is brief discussion of radiofrequency (RF) absorption, RF coil efficiency, potential phase shift, field homogeniety, thermal effects, and FDA approval with magnetic systems of increasing field strength. Site planning considerations are discussed comparing permanent, resistance, and superconductive magnets as well as RF and magnet shielding.

There is theoretical and practical discussion of paramagnetic contrast agents which act by enhancing proton relaxation due to unpaired electron

CONTINUED ON NEXT PAGE



"That was some booster shot!"

CONTINUED FROM PRECEDING PAGE
spins in the contrast agent that generate an intense local magnetic field. A brief discussion of monoclonal antibody imaging and chemical-shift spectroscopy is also included.

This book is not a primer on MRI; a good understanding of basics is a prerequisite and is best obtained elsewhere but Chapter 7 (Magnetic Resonance Imaging at High Field Strength Magnetic Fields) contains the best discussion this reviewer has read of the effects of field strength on signals of proton density, T_1, T_2, and signal-to-noise. It would do well as the opening chapter.

The contributors are nationally recognized authorities, the image reproduction excellent, and the subject index is complete. This annual series should appeal to all diagnostic radiologists and others interested in MRI.—**Robert P. Penkava, M.D., Evansville, Diagnostic Radiology**

No Greater Love

A medical novel by Frank G. Slaughter. Copyright 1985, Doubleday and Co., Inc., Garden City, N.Y. 252 pages, hardcover, $15.95.

We all know this author as the popularizer by his novels of persons and topics relating to medicine. According to the list heading this book, he has written no less than 61 such stories.

This is the story of Dr. Ted Bronson, "transplant surgeon" and red-headed, sexy Dr. Liz MacGowan. They work in south Florida in "Biscayne General." The plot is well made and concerns these two lovers and their sensational cases. Ted has to transplant a liver into a rich Cuban American (his Down's Syndrome brother is the donor!) while Liz has to deliver the heir to an Arabian sheikdom from a brain dead mother! One could find these dramatic, but not as much as their escape from a submerged Porshe automobile. The "mob" had forced them off the Tamiami Trail into a canal and they lived awhile in the air bubble near the roof.

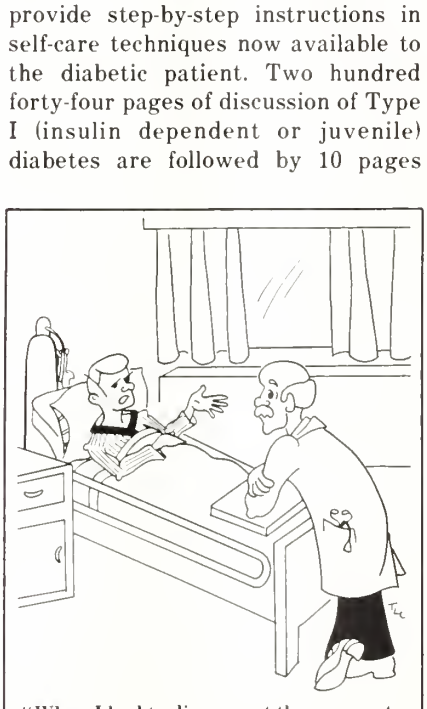
The author has been successfully selling his writings for about 40 years so he has no reason to make any excuses for this outrageous stuff. This is craft and no special pretense of artistry is made—it's just that the technique is clumsy. For instance, there are at least three chapter endings with "... but there as it happened he was wrong" and so on.

If you like the soap opera "General Hospital," you should go out and buy this book.—**Rodney A. Mannion, M.D., LaPorte, Urological Surgery**

Living with Diabetes

By Genell J. Subak-Sharpe. Copyright 1985, Doubleday and Co., Inc., Garden City, N.Y. 291 pages, hardcover, $16.95.

Living with Diabetes is a "how to" book for diabetic patients and their families. In it are explained clearly the methods of management favored by most diabetologists today. Its author, Genell J. Subak-Sharpe, and her medical advisors, Drs. Charles Peterson and Lois Jovanovik, urge strict control of blood glucose levels as the constant goal of treatment. They state their reasons for this advice and then provide step-by-step instructions in self-care techniques now available to the diabetic patient. Two hundred forty-four pages of discussion of Type I (insulin dependent or juvenile) diabetes are followed by 10 pages describing Type II (adult onset) diabetes.



"When I had to disconnect the oxygen to have a cigarette, I decided it was time to quit."

A short history of the disease, including details of the discovery of insulin, is followed by a section on the diagnosis of diabetes and a description of its expression in five patients of The Diabetes Self-care Program, "often referred to as the Rockefeller-Cornell Diabetes Program." Those patients provide the story line allowing continuing emphasis on self-testing of urine and blood, intelligent use of insulin in all its forms, the importance of diet and exercise, and the day-by-day trials and triumphs of patients outfitted with continuous infusion insulin pumps.

The problems of diabetes in pregnancy are addressed in a special chapter of 23 pages chock full of statistics, classifications and therapeutic tips. The concerns of mother and baby are discussed with candor. The importance of close cooperation between patient and physician is made clear. The difficulties in managing diabetes in children are described in six pages in little detail; but a study from Australia is used to demonstrate that home blood glucose testing is a boon to therapy at any age. Similar generalities fill the short chapters on Diabetes in Adolescence and Type II Diabetes. One is led to conclude that the Self-care Group must have defined age limits.

The author's message is a good one—that methods available now for the control of diabetes can produce a continuing metabolic state not unlike that of a non-diabetic individual. And that the use of home blood glucose testing allows a tailoring of insulin dosage to the life style and personal metabolism of each diabetic patient. And that one can check the adequacy of diabetic control with periodic measurement of hemoglobin A1c. There are other messages the author seems bent on sending, if only subliminally. Thus the assembling of information as if to prove a thesis which might be described as unproven elsewhere in the text. Chapter 11 is one such long nonsequitur. Certain other problems arise for the author. Careful measurement of the gram weight of

foods is advocated so that a precise balance of protein, carbohydrate, and fat content are achieved. But the Cornell-Rockefeller group prefers much less carbohydrate, much more fat and some more protein than do the percent distribution guidelines of the American Diabetes Association. The patient must wonder why the need for precision about something so unsettled. The patient is offered some sample menus, but their caloric distribution and gram weights are often difficult to compute from the included material. Most patients would yearn for their old food exchange charts, I believe.

This book is simply bound and legibly printed and its pages are variously sized. The proofreading was loose. There are misspelled words, typographical errors and sentence structure weaknesses. Nineteen infinitives were neatly split. The calories per Kilogram chart on page 79 is inadequately labeled. The insulin adjustment chart on page 86 lists fixed doses, uncorrected for patient weight or usual dosage. Errors of fact are few and minor. The selected bibliography is not referred to in the text.

Physicians can expect that their patients who study *Living with Diabetes* will gain much in their knowledge of diabetes and will understand more clearly the treatment of Type I diabetes in adults. Physicians reeling under the pressure of sorting out their Diagnosis Related Groups will hope that their patients don't take too seriously the advice on page 212 during the discussion of infections: "In fact, if you have even the slightest doubts about being able to maintan control, you should seek help without delay. This may even mean checking into a hospital until the infection is under control and the diabetes is again in check."—**Thomas J. Conway, M.D., Terre Haute, Pediatrics**



"I think the wine at bedtime is getting out of hand."

Current Emergency Diagnosis & Treatment

2nd Edition, edited by John Mills, M.D., et al. Copyright 1985, Lange Medical Publications, Los Altos, Calif. 864 pages, softcover, $28.

This second edition of *Current Emergency Diagnosis & Treatment* focuses on the need for rapid diagnosis (often in question when the patient is first seen in the emergency department), as well as the combination of evaluation and treatment (both of which must take place quickly and simultaneously). The first 14 chapters of the text are oriented to these considerations. Of assistance to the emergency room physician are algorithms providing brief guidelines to management.

The book provides specific information pertaining to diagnosis, consultation, treatment, and disposition for the problems most frequently encountered by emergency physicians.

An innovative and useful device is a detailed list of chapter contents at the start of each chapter. This clearly facilitates quick reference in the frenetic atmosphere of the emergency room.

The volume is well illustrated. End papers provide tables relating to intravenous drugs, intravenous solutions, and drug doses.

The target audience for the text includes physicians, residents, and medical students who provide emergency care. It should also be useful for technicians and nurses. The authors of the text include well qualified West Coast physicians plus an imposing group of associate authors. Like all Lange Medical Publications texts, the work is kept up to date by frequent revisions. The text is sturdily bound, and its white color should make it stand out on any bookshelf. It is modestly priced at $28. This reviewer enthusiastically recommends it for the target audience.—**W. D. Snively Jr., M.D., Evansville, Internal Medicine**

Premenstrual Syndrome: A Clinic Manual

By H. Jane Chihal, M.D., Ph.D. Copyright 1985, Creative Infomatics, Inc., Durant, Okla. 149 pages, softcover.

This timely book is precisely written, and contains a world of information. The author lays to rest the concept that premenstrual syndrome is simply an emotional problem. Several treatment programs are outlined specifically—both pros and cons of each are listed in detail. This short treatise should be reviewed by most all physicians dealing with this vexing problem. The suggestion that Dr. Caihal plans an update each six months is excellent, because of the rapid changes in understanding the pathogenesis of the premenstrual syndrome and equally *rapid* changes in treatment modalities.

An excellent, worthwhile treatise.—**I.E. Michael, M.D., Indianapolis, Internal Medicine**



"I'm sorry about your problem, but my name is Marvin Davenport."

1985 Annual Meeting

INDIANA STATE MEDICAL ASSOCIATION

November 14-17, 1985
Thursday thru Sunday
South Bend
Century Center

Hotel Accommodations
South Bend
Marriott Hotel

Avenues to Travel

- House of Delegates Sessions
- Reference Committees
- Medical Section Meetings
- IMPAC Luncheon and Meeting
- 50-Year Club Luncheon
- General Scientific Meeting on "PHYSICIANS and STRESS" (Open To Spouses)
- General Membership Program — WOODY HERMAN and the THUNDERING HERD
- President's Dinner and Dance — BO THORPE and his ORCHESTRA

stop! look! and listen! to:

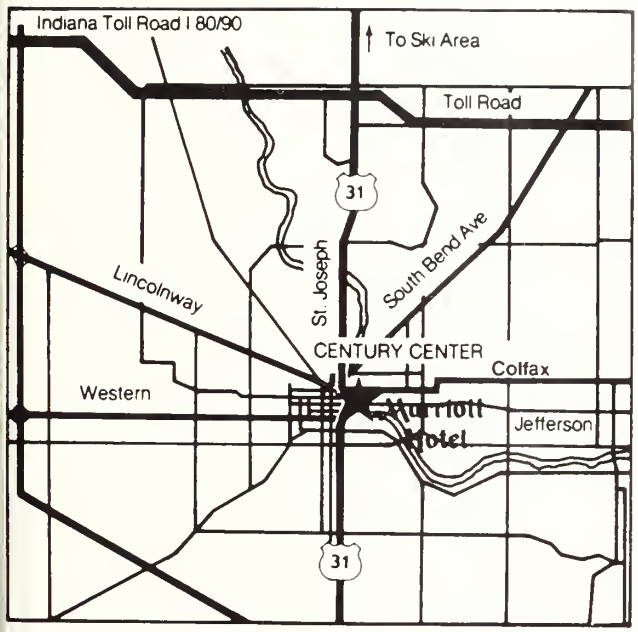
medicine at the crossroads

Abridged Schedule of Events



JAMES L. GRAINGER, M.D.
SOUTH BEND
Chairman
Convention Arrangements

136th Annual Convention
Century Center/Marriott Hotel
123 N. St. Joseph St.,
South Bend, Indiana
(219) 234-2000



THURSDAY, November 14
EST
9:00 a.m. . . Board of Trustees Meeting
10 a.m. . . . Committee on Rules and Order of Business
11:15 a.m. . New Delegates Welcoming Meeting
11:30 a.m. . Board of Trustees Luncheon
1 p.m. . . . . First Session, House of Delegates
5 p.m. . . . House of Delegates Dinner Buffet
7 p.m. . . . Reference Committee Meetings (1, 2, 4, 5)

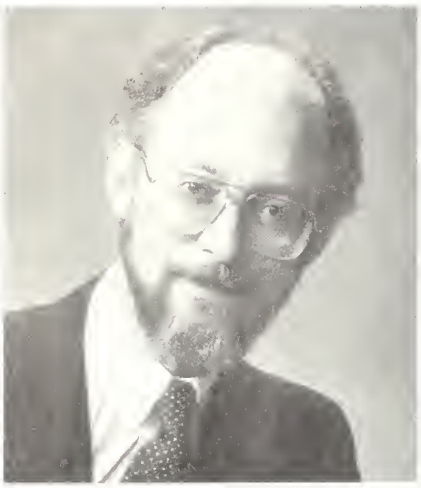
FRIDAY, November 15
9 a.m. . . . . Reference Committee 3 Meeting
9:30 a.m. . . Reference Committee 6 Meeting
Noon . . . . IMPAC Luncheon
Noon . . . . Fifty Year Club Luncheon
2-5:30 p.m. General Meeting ("Physicians & Stress")
7 p.m. . . . . General Membership Reception
8:30 p.m. . . General Membership Entertainment Program
(Woody Herman and the Thundering Herd)
10:30 p.m . Meet the Artist Reception

SATURDAY, November 16
8 a.m. . . . . Board of Trustees Breakfast/Meeting
8:30-5:00 . . Medical Section Meetings
11:30 a.m. . Past Presidents' Luncheon
Noon . . . . . Editorial Board Luncheon/Meeting
3 p.m. . . . . Small County Delegates Meeting
6:30 p.m. . . President's Reception
7:30 p.m. . . President's Dinner
9 p.m. . . . . Dance—Bo Thorpe and Generation II

SUNDAY, November 17
8 a.m. . . . . Board of Trustees Breakfast/Meeting
9:30 a.m. . . Final Session, House of Delegates
2 p.m. . . . . Board of Trustees Organizational Meeting, Executive Committee Meeting and Buffet

Proceedings to be Published in January 1986

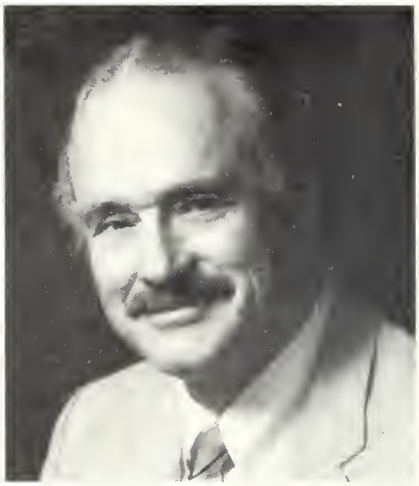
The proceedings of the 136th Annual Meeting of the House of Delegates, Indiana State Medical Association, to be conducted Nov. 14-17, 1985, at the Century Center, South Bend, Ind., will be published in the January 1986 issue of INDIANA MEDICINE. Included will be convention photographs, results of elections, membership of reference committees, an attendance roster of the House of Delegates, resolutions, various annual reports, new members of the ISMA Fifty Year Club, scientific exhibit winners and ISMA Journalism Award winners.



LARRY M. DAVIS, M.D.
Indianapolis
Assistant Clinical Professor of Psychiatry, I.U. School of Medicine; president and founder, Davis Psychiatric Clinic, Indianapolis; member, American Psychiatric Association; chairman, ISMA Commission on Physician Impairment; M.D. degree from Indiana University.



NANCY C. A. ROESKE, M.D.
Indianapolis
Professor, Dept. of Psychiatry, I.U. School of Medicine; fellow, American Psychiatric Association; fellow, American Association for Social Psychiatry; fellow, American College of Psychiatrists; member, American Academy of Child Psychiatry; M.D. degree from Cornell University.



G. DOUGLAS TALBOTT, M.D.
Atlanta, Ga.
Clinical Associate Professor of Psychiatry, Emory University School of Medicine; member, American College of Cardiology; program director of Caduceus Hall, the Alcohol and Drug Facility at Ridgeview Institute; president, American Academy of Addictionology; M.D. degree from Columbia University.



BRYCE B. ROHRER, M.D.
Elkhart
Emergency physician, Elkhart and Goshen General Hospitals; medical director, Interventions, Inc., a youth chemical dependency treatment center; member, American College of Emergency Physicians; charter fellow, American Academy of Family Physicians; vice-chairman, ISMA Commission on Physician Impairment; M.D. degree from Indiana University.

Friday's General Meeting to Examine Subject of 'Physicians and Stress'

Physicians and their spouses are encouraged to attend this year's general scientific meeting on "Physicians and Stress," to be conducted Friday afternoon, Nov. 15.

Three hour-long sessions followed by a panel discussion are planned. Topics include the Indiana Impaired Physician Network, Drug Abuse, and Coping with Stress. The panel discussion will zero in on the Physician and Family Stress.

The speakers, all experts in the subject of stress, will be Dr. Larry M. Davis, Dr. Bryce B. Rohrer, Dr. Nancy C. A. Roeske and Dr. G. Douglas Talbott.

The session is scheduled to last from 2 until 5:30 p.m.

About the Hotel

The South Bend Marriott Hotel, located at Colfax Avenue and St. Joseph Street, is a nine-story structure with 300 guest rooms. It is right across from Century Center, a 250,000-square-foot convention and civic facility that opened in 1977.

The hotel features a 4,950-square-foot Grand Ballroom, divisible into three sections. It can accommodate up to 775 people for receptions, 490 for banquets.

The Looking Glass Restaurant, with an extensive menu, overlooks the hotel's atrium. For cocktails and music, try the Terrace Lounge.

An indoor pool, sauna, valet and laundry service are among the hotel's amenities. An 18-hole golf course and 15 lighted tennis courts are nearby. Complimentary parking for registered hotel guests is provided.



Congressman McEwen

Congressman McEwen To Be Guest Speaker at IMPAC Luncheon

Ohio Congressman Bob McEwen will be the guest speaker at the IMPAC luncheon, scheduled to begin at noon, Friday, Nov. 15.

McEwen, representing Ohio's 6th Congressional District since his election in 1980, is recognized by his colleagues and constituents as a leader of congressional conservatives.

ISMA members and spouses are encouraged to attend the luncheon and hear Rep. McEwen's assessment of issues currently being considered in the Congress.

McEwen serves on the Public Works and Transportation Committee, the House Permanent Select Committee on Intelligence, and the Veterans Affairs Committee, where he is ranking member of the important Subcommittee on Education, Training and Employment. He is also a member of the House Task Force on Economic Policy, the Steel Caucus, the Human Rights Caucus, the High Technology Task Force and the Republican Agricultural Task Force.

Sightseeing in South Bend

If you find time to break away for a while during the convention, here's a preview of what to see in and around South Bend:

- Convenient to the South Bend Marriott Hotel is Bendix Woods, with skiing facilities, hiking trails and picnic areas. Leeper Park is only a mile from the Marriott.
- The University of Notre Dame, with its beautiful 1,250-acre campus and Golden Dome football stadium, is a short ride north on U.S. 31. Right across the street is St. Mary's College.
- Across from the hotel at Century Center are the Art Center and Bendix Theatre. Nearby is the Discovery Hall Museum, home of the famous Studebaker collection—buggies, wagons and automobiles, all built in South Bend.
- The Morris Civic Auditorium is where you can enjoy performances by Broadway theatre companies and the South Bend Symphony Orchestra.
- The Old Courthouse Museum, in the heart of the city, offers exhibits and artifacts collected since 1895 by the Northern Indiana Historial Society. The Old Courthouse building itself was erected in 1855.
- The historic, 80-acre Amish Acres farm in nearby Nappanee tells the story of the way of life of the Amish. The farm includes 18 restored buildings, complete with the various tools and trappings of yesteryear.
- The 20-acre "100 Center Complex" in Mishawaka (east of South Bend along U.S. 33) houses many specialty shops in the original buildings of the old Kamm's Brewery operation.
- Potawatomi Park in South Bend is a 64-acre complex containing swimming pools, tennis courts, playgrounds, picnic areas, botanical gardens and Potawatomi Zoo.

President's Night

Saturday, November 16

6:30 p.m.—Reception
7:30 p.m.—Dinner
9:00 p.m.—Dance (Bo Thorpe and Generation II)

Menu: Beef Consomme Royale
Medallions of Tenderloin Bordelaise
Anna Potatoes
Stir Fried Vegetables
Double Chocolate Mousse



THE BIG BAND SOUND of Woody Herman and The Thundering Herd will stir nostalgic memories during their concert performance at South Bend's Bendix Theater Friday evening, Nov. 15. Woody, a legend of jazz and popular music, has been leader of his own band for 44 years. His hits have included such favorites as Blue Flame, Ebony Concerto, Woodchopper's Ball, Blues in the Night, Laura, and Caladonia! Caladonia. The Friday performance is open to the public, so reservations will be required.

Guest Speakers

Various ISMA medical section meetings are planned for Saturday, Nov. 16.

AIDME (Association of Indiana Directors of Medical Education): Senator Dan Quayle of Indiana will discuss the funding of graduate medical education.

Radiology: Dr. A. Patricia Harper of Indianapolis will discuss "Breast Imaging."

Preventive Medicine & Public Health: Dr. Andrew G. Dean of Atlanta, Ga., will discuss "Public Health at the Crossroads: A New Era for Epidemiology."

Ophthalmology: Mr. Philip G. Reisbeck of Aurora, Colo. will discuss socio-economic issues in ophthalmology.

Pathology-Surgery (joint session): Dr. Robert A. McDougal of Danville and Dr. Robert Baker of Indianapolis will address the topic of "AIDS." Dr. Steven A. Gould of Chicago will discuss "Acellular Oxygen Carriers" and Dr. Victor H. Muller of Indianapolis will discuss "Blood Component Therapy."

Neurological Surgery: Dr. Julian T. Hoff of Ann Arbor, Mich. will discuss cervical spine surgery and vestibular nerve section for intractable vertigo. Presenting papers will be Dr. Thomas R. Keucher of South Bend and Dr. Bob Yount.

Although other ISMA medical sections will conduct meetings during the convention, their plans were not firm at press time.



DAN QUAYLE
U.S. Senator, Indiana
AIDME
Elected to U.S. Senate in 1980; member of three Senate committees—Labor and Human Resources, Armed Services, and Budget; serves on Labor Subcommittee on Education, Arts and Humanities; Law degree from Indiana University.



A. PATRICIA HARPER, M.D.
Indianapolis
Radiology
Associate Clinical Professor, Dept. of Radiology, I.U. School of Medicine; subspecialty practice involves diagnosis of breast diseases at the Indianapolis Breast Center; member, American College of Radiology, Radiological Society of North America, and American Institute of Ultrasound in Medicine; M.D. degree from University of West Indies, Kingston, Jamaica.



MR. PHILIP G. REISBECK
Aurora, Colorado
Ophthalmology
President, National Health Systems, Inc., Aurora, Colo.; management consultant to health delivery systems; consultant to PPOs, HMOs, PSROs; business expertise in marketing, third-party administration, data processing support services, and state-of-the-art computer applications for the administration of health programs.



ANDREW G. DEAN, M.D., M.P.H.
Atlanta
Preventive Medicine
Medical epidemiologist, Centers for Disease Control, Atlanta; developing computer software for epidemic investigation; formerly Adjunct Associate Professor of Epidemiology, University of Minnesota School of Public Health; diplomate, American Board of Preventive Medicine; fellow, American College of Epidemiology; M.D. degree cum laude from Harvard Medical School.

Guest Speakers



STEVEN A. GOULD, M.D.
Chicago
Surgery
Associate Professor in Surgery, University of Chicago Pritzker School of Medicine; postdoctoral research fellow, Michael Reese Hospital; fellow, American College of Surgeons; certified by the American Board of Surgery; M.D. degree from Boston University.



VICTOR H. MULLER, M.D.
Indianapolis
Pathology
Associate Pathologist, St. Vincent Hospital, Indianapolis; chairman, Indiana State Board of Health Committee on Hemophilia; member, American Society of Clinical Pathologists; certified, American Board of Pathology (Anatomic) and Immunohematology and Blood Banking; M.D. degree from Indiana University.



JULIAN T. HOFF, M.D.
Ann Arbor, Mich.
Neurological Surgery
Professor and Head, Section of Neurosurgery, Dept. of Surgery, University of Michigan; certified, American Board of Neurological Surgeons; member, American Academy of Neurological Surgeons, American Association of Neurological Surgeons and American College of Surgeons; M.D. degree from Cornell University.

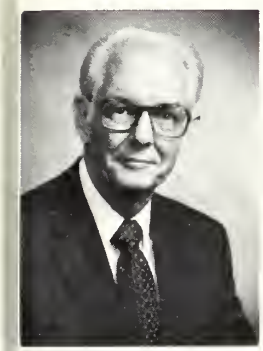


ROBERT A. McDOUGAL, M.D.
Danville
Pathology
Associate Clinical Professor, Dept. of Pathology, I.U. School of Medicine; pathologist and director of laboratory, Hendricks County Hospital, Danville; fellow, College of American Pathologists and American Society of Clinical Pathology; certified in anatomic and clinical pathology, American Board of Pathology; certified by the American Board of Nuclear Medicine; M.D. degree from Indiana University.



LAWRENCE E. ALLEN, M.D.
President
Indiana State Medical Association
1984-1985

Officers and Others



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President-Elect
Terre Haute



George T. Lukemeyer, M.D.
Immed. Past President
Indianapolis



George H. Rawls, M.D.
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Max Wesemann, M.D.
Asst. Treasurer
Franklin



John D. MacDougall, M.D.
Ch, Board of Trustees
Beech Grove



Lawrence E. Allen, M.D.
Ch, Exec. Committee
Anderson



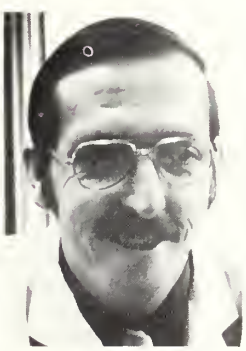
Shirley T. Khalouf, M.D.
Speaker of the House
Marion



Fred W. Dahling, M.D.
Vice-Speaker
New Haven



Davis W. Ellis, M.D.
Executive Committee
Rushville



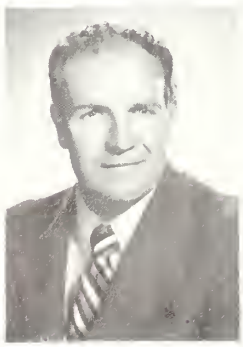
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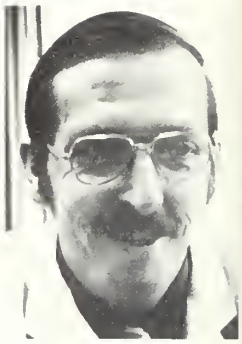
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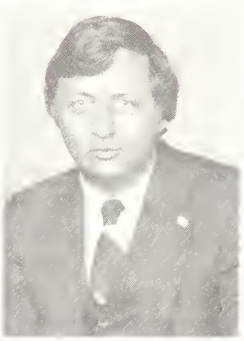
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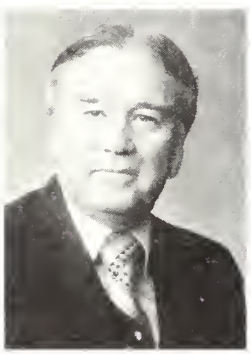
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*Elizur H. Deming, Lafayette	1853	1854
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*Talbot Bullard, Indianapolis	1857	1858
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*David Hutchinson, Mooresville	1859	1860
*Benjamin S. Woodworth, Ft. Wayne	1860	1861
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*James F. Hibberd, Richmond	1862	1863
*John Sloan, New Albany	1863	....
*John Moffett (acting), Rushville	1863	1864
*Samuel L. Linton, Columbus	1864	....
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*Myron H. Harding, Lawrenceburg	1865	1866
*Vierling Kersey, Richmond	1866	1867
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*George Sutton, Aurora	1869	1870
*Robert N. Todd, Indianapolis	1870	1871
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*Joel Pennington, Milton	1872	1873
*Isaac Casselberry, Evansville	1873	....
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*John H. Helm, Peru	1875	1876
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*Jacob R. Weist, Richmond	1879	1880
*Thomas B. Harvey, Indianapolis	1880	1881
*Marshall Sexton, Rushville	1881	1882
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*James H. Woodburn, Indianapolis	1884	1885
*James S. Gregg, Ft. Wayne	1885	1886
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*William H. Wishard, Indianapolis	1888	1889
*James D. Gatch, Lawrenceburg	1889	1890
*Gonsolvo C. Smythe, Greencastle	1890	1891
*Edwin Walker, Evansville	1891	1892
*George F. Beasley, Lafayette	1892	1893
*Charles A. Daugherty, South Bend	1893	1894
*Elijah S. Elder, Indianapolis	1894	....
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*William N. Wishard, Indianapolis	1897	1898
*John C. Sexton, Rushville	1898	1899
*Walker Schell, Terre Haute	1899	1900
*George W. McCaskey, Ft. Wayne	1900	1901
*Alembert W. Brayton, Indianapolis	1901	1902
*John B. Berteling, South Bend	1902	1903
*Jonas Stewart, Anderson	1903	1904
*George T. MacCoy, Columbus	1904	1905
*George H. Grant, Richmond	1905	1906
*George J. Cook, Indianapolis	1906	1907
*David C. Peyton, Jeffersonville	1907	1908
*George D. Kahlo, French Lick	1908	1909
*Thomas C. Kennedy, Shelbyville	1909	1910
*Frederick C. Heath, Indianapolis	1910	1911
*William F. Howat, Hammond	1911	1912
*A. C. Kimberlin, Indianapolis	1912	1913
*John P. Salb, Jasper	1913	1914
*Frank B. Wynn, Indianapolis	1914	1915
*George F. Keiper, Lafayette	1915	1916
*John H. Oliver, Indianapolis	1916	1917
*Joseph Rilus Eastman, Indianapolis	1917	1918
*William H. Stemm, North Vernon	1918	1919
*Charles H. McCully, Logansport	1919	1920
*David Ross, Indianapolis	1920	1921
*William R. Davidson, Evansville	1921	1922
*Charles H. Good, Huntington	1922	1923
*Samuel E. Earp, Indianapolis	1923	1924
*Eldridge M. Shanklin, Hammond	1924	1925
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*Charles N. Combs, Terre Haute	1925	1926
*Frank W. Cregor, Indianapolis	1926	1927
*George R. Daniels, Marion	1926	1928
*Charles E. Gillespie, Seymour	1927	1929
*Angus C. McDonald, Warsaw	1928	1930
*Alois B. Graham, Indianapolis	1929	1931
*Franklin S. Crockett, Lafayette	1930	1932
*Joseph H. Weinstein, Terre Haute	1931	1933
*Everett E. Padgett, Indianapolis	1932	1934
*Walter J. Leach, New Albany	1933	1935
*Roscoe L. Sensenich, South Bend	1934	1936
*Edmund D. Clark, Indianapolis	1935	1937
*Herman M. Baker, Evansville	1936	1938
*Edmund M. Van Buskirk, Ft. Wayne	1937	1939
*Karl R. Ruddell, Indianapolis	1938	1940
*Albert M. Mitchell, Terre Haute	1939	1941
*Maynard A. Austin, Anderson	1940	1942
*Carl H. McCaskey, Indianapolis	1941	1943
*Jacob T. Oliphant, Farmerburg	1942	1944
*Nelson K. Forster, Hammond	1943	1945
*Jesse E. Ferrell, Fortville	1944	1946
*Floyd T. Romberger, Lafayette	1945	1947
*Cleon A. Nafe, Indianapolis	1946	1948
*Augustus P. Hauss, New Albany	1947	1949
*C. S. Black, Warren	1948	1950
*Alfred Ellison, South Bend	1949	1951
*J. William Wright, Indianapolis	1950	1952
*Paul D. Crimm, Evansville	1951	1953
*Wm. Harry Howard, Hammond	1952	1954
*Walter L. Portteus, Franklin	1953	1955
*Walter U. Kennedy, New Castle	1954	1956
*Elton R. Clarke, Kokomo	1955	1957
M. C. Topping, Terre Haute	1956	1958
Kenneth L. Olson, South Bend	1957	1959
*Earl W. Mericle, Indianapolis	1958	1960
*Guy A. Owsley, Hartford City	1959	1961
*Harry R. Stimson, Gary	1960	1962
*Maurice E. Glock, Fort Wayne	1961	1963
Donald E. Wood, Indianapolis	1962	1964
Joseph M. Black, Seymour	1963	1965
*Kenneth O. Neumann, Lafayette	1964	1966
*Eugene S. Rifner, Van Buren	1965	1967
*G. O. Larson, LaPorte	1966	1968
Patrick J. V. Corcoran, Evansville	1967	1969
Lowell H. Steen, Hammond	1968	1970
Malcolm O. Scamahorn, Pittsboro	1969	1971
Peter R. Petrich, Attica	1970	1972
*James H. Gosman, Indianapolis	1971	1973
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Vincent J. Santare, Munster	1974	1976
John W. Beeler, Indianapolis	1975	1977
*Eli Goodman, Charlestown	1976	1978
*James A. Harshman, Kokomo	1977	1978
*Arvine G. Popplewell, Indianapolis	1978	1980
Alvin J. Haley, Carmel	1979	1981
Martin J. O'Neill, Valparaiso	1980	1982
John A. Knote, Lafayette	1981	1983
George T. Lukemeyer, Indianapolis	1982	1984
Lawrence E. Allen, Anderson	1983	1985

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12—Thomas A. Felger, Fort Wayne (1986)
13—Steven M. Yoder, Goshen (1985)

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10—Pres:
Secy:
Annual Meeting:
11—Pres: Michael Ball, Marion
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Annual Meeting: Sept. 10, 1986, Elkhart

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7— Eugene G. Roach, Beech Grove
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9— Ben H. Park, Lebanon
10— Mitchell E. Goldenberg, Munster
11 * Edward Langston, Flora
12— Fred Dahling, New Haven
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County Medical Society Directory

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Boone	9	Dallas E. Coate, Lebanon	Mary H. Knotts, c/o Sandy Baldwin, 1124 N. Lebanon St., Lebanon 46052
Carroll	11	Brian L. Doggett, Delphi	Robert Seese, 101 W. North St., Delphi 46923
Cass	11	Keven W. Dodt, Logansport	Ruben A. Calisto, c/o Box 897, Logansport 46947
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Clay	5	Everett L. Conrad, Brazil	Rahin Farid, Box 108, Brazil 47834
Clinton	9	Stephen D. Tharp, Frankfort	Charles E. Bush, 1201 Oak St., Frankfort 46041
Daviess-Martin	2	James P. Beck, Washington	Horace Norton, 325 Knollwood, Washington 47501

County Medical Society Directory

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Dubois	3	Robert D. Bretz, Huntingburg	939 Memorial Drive, P.O. Box 723, Jasper 47546
Elkhart	13	George A. Mark, Elkhart	N.S. Lankford, 105 N. Nappanee St., Elkhart 46514
Fayette-Franklin	6	William A. Nesbitt, Connersville	Kant K. Patel, 1728 Virginia Ave., Connersville 47331
Floyd	3	Stanley F. Seipel, Lanesville	Daniel H. Cannon, 1201 E. Spring St., New Albany 47150
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Fulton	13	Jamie G. Ramos, Rochester	Steven Musselman, 105 W. Rochester St., Akron 46910
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Greene	2	Frederick R. Ridge Jr., Linton	Harry Rotman, 111 E. Main St., Box 185, Jasonville 47438
Hamilton	9	Walter P. Beaver, Noblesville	Dennis L. Pippenger, 497 Westfield Rd., Noblesville 46060
Hancock	6	Stephen J. Flink, Greenfield	Thomas M. O'Connor, 120 McKenzie Road, Greenfield 46140
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Hendricks	7	Larry D. Lovall, Danville	Michael J. Pyle, 206 Meadow Dr., Danville 46122
Henry	6	Nancy W. Griffith, New Castle	Donald E. Vivian, R.R. 4, Box 6, New Castle 47362
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Huntington	11	Reeve B. Peare, Huntington	Nabil A. Gayed, 1496 Gardendale Ave., Huntington 46750
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Jennings	4		John B. Schuck, Doctors' Park #2, 311 Henry St., North Vernon 47265
Johnson	7	Steven A. Weber, Franklin	Craig A. Moorman, 1101 W. Jefferson St., #C, Franklin 46131
Knox	2	Charles Hedde, Vincennes	Michael J. Kelly, 706 S. 15th St., Vincennes 47591
Kosciusko	13	Steven P. Grossnickle, Warsaw	Bruce P. Grossnickle, 2251 DuBois Dr., Warsaw 46580
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Lake	10	Barron M. Palmer, Hammond	George J. Volan, 500 W. Lincoln Way 30, Merrillville 46410 Dan R. Hill, Exec. Dir., 1205 W. Lincoln Hwy., #7-A, Merrillville 46410
LaPorte	13	John H. Phillips, Michigan City	Richard J. Houck, 360 Dunes Plaza, Michigan City 46360 Wade Kanney, Exec. Sec. P.O. Box 574, LaPorte 46350
Lawrence	3	David P. Schneider, Bedford	James M. Jacobi, 2900 W. 16th St., Bedford 46421
Madison	8	William J. Kopp, Anderson	Diane Van Ness, R.R. #4, Box 352A, Alexandria 46001
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Marshall	13	James N. Hampton, Argos	Byron Holm, 1305 N. Center, Plymouth 46563
Miami	11	Lloyd L. Hill, Peru	Agnes Kenny, P.O. Box 578, Bunker Hill 46970
Montgomery	9	Malcolm K. Baird, Crawfordsville	Tony L. Yeiter, Culver Union Hospital, Crawfordsville 47933
Morgan	7		Joyce Branham, 2209 John R. Wooden Dr., Martinsville 46151
Newton	9	Marcelino F. Guzman, Morocco	Arthur Schoonveld, 420 E. Main St., Brook 47922
Noble	12	James D. Chandler, Avilla	Carl F. Stallman, 409 E. Wayne, Kendallville 46755
Orange	3	Charles X. McCalla, Paoli	Philip T. Hodgin, 420 N. Maple, Orleans 47432
Owen-Monroe	2	Brandt L. Ludlow, Bloomington	Dwight L. Stauffer, 711 W. Second St., Bloomington 47401 Arlene Rhea, Exec. Dir., P.O. Box 5092, Bloomington 47402
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Posey	1		Herman Hirsch, 130 W. 5th St., Mt. Vernon 47620
Pulaski	13	William R. Thompson, Winamac	Che-Lu Tseng, 620 E. 13th St., Winamac 46996
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Ripley	4	Manuel G. Garcia, Batesville	A. E. Jaojoco, Margaret Mary Hospital, Batesville 47006
Rush	6		Douglas Morrell, 606 E. 11th St., Rushville 46173
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Scott	3	Marvin L. McClain, Scottsburg	Wm. M. Scott, Medical Arts Bldg., Highway 31 North, Scottsburg 47170
Shelby	6	Joseph Moheban, Shelbyville	David C. Esarey, P.O. Box 370, Shelbyville 46176
Spencer	1	John C. Glackman Jr., Rockport	Michael O. Monar, 6th & Main, Rockport 47635
Starke	13	Howard J. Henry, Knox	Walter Fritz, 1520 S. Heaton St., Knox 46534
Steuben	12	Terry L. Shipe, Angola	Chi M. Pham, 401 S. Broad St., Fremont 46737
Sullivan	2	Irvin H. Scott, Sullivan	Joseph E. Dukes, P.O. Box 278, Dugger, 47848
Tippecanoe	9	Thomas A. Bridge, Lafayette	Paula Meluch, c/o 2110 Underwood St., Lafayette 47904
Tipton	9	Albert E. Stouder, Jr., Tipton	Michael E. Harper, RR4, Box 375, Tipton 46072
Vanderburgh	1	Robert R. Penkava, Evansville	Mrs. Debbie Stressner, Acting Exec. Dir., 421 N. Main St., Evansville 47711
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Warrick	1	Syed A. Ali, Boonville	Kishor R. Bhatt, 1116 Millis Ave., Boonville 47601
Washington	3	Mark E. Manship, Salem	Ann L. Anderson, 1000 N. Shelby St., Salem 47167
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Whitley	12	John L. Vogel, Columbia City	Claude J. Heritier, 700 Hill Dr., Columbia 46725
Resident Med. Society		Steven G. Lester, Indianapolis	Silvio Garcia, 3055 Coast Dr., Indianapolis 46224

Report of the Chairman, Board of Trustees

Referred to: Ref. Comm. I

The first meeting of this year's Board of Trustees was held Oct. 22 immediately following the Annual Meeting, beginning another busy year of activity. In this report I will describe those actions of the Board which seemed to me most substantive.

At the outset the Board was reminded that the House of Delegates is the legislative and policy-making body of the Association and that the Board is the executive body and its first duty is to implement the resolutions as adopted by the House. Its other duties are defined in the bylaws and include attending to policy matters during the interim between meetings of the House of Delegates.

The Board proposed that a statewide seminar be held to address the impact of Alternative Health Delivery Systems. That seminar in the format of a leadership conference entitled "Medicine at the Crossroads" was subsequently held at the Airport Holiday Inn in Indianapolis and proved to be very informative to those members of the Association who attended.

Approval was granted by the Board to the Resident Medical Society's selection of Steven Lester, M.D. as a nonvoting member of the ISMA Board and under his leadership a "Starting Your Practice Workshop" and a coordinated placement service for residents was held.

The Board has been aware of the growing need for increased space for the ISMA headquarters and during the year gave due consideration to recommendations of the Executive Committee, chaired by President Lawrence E. Allen, M.D., and the Future Planning Committee, chaired by William C. VanNess, II, M.D. Approval was given to a facility study by Richardson, Munson and Wier and it was apparent from this study that the expenditures required to enlarge the present ISMA headquarters building to meet our needs would far exceed the monetary value of the resultant facility. Several proposals to acquire existing office buildings were then considered and the Board approved an offer to purchase the Foremost Building at Keystone at the Crossing. At the time of this writing, ISMA has an offer to purchase the three pieces of property it now owns and this proposal will be considered at the next Board meeting.

John W. Luce, M.D., 13th District trustee, presented to the Board serious concerns regarding the I-PRO review processes as they had been applied in his district and it was apparent that other trustees shared his concerns. Dr. Paul Muller, chairman of I-PRO, discussed these concerns with the Board and an ad hoc I-PRO Liaison Committee was formed. This committee, under the vigorous leadership of Dr. Luce, met with the I-PRO Executive Committee and processes are underway to improve communications between the Board and I-PRO and to ensure that the review regulations are administered fairly and consistently throughout the state.

Capably chaired by R. Adrian Lanning, M.D., 9th District alternate trustee, the Commission on Public Relations recommended and the Board approved a $150,000 public relations program aimed at senior adults. Entitled "Healthy, Happy and Wise," the program will include six 30-minute TV programs; 30 minute-long feature stories, taken from the 30-minute programs and aired over commercial broadcast stations; and six 30-second public service announcements which will be offered to the commercial broadcast stations for airing free of charge.

The Board was pleased to approve extending the Lincoln medical and dental insurance contract for six months, without an increase in rates and with no decrease in the covered benefits, as recommended by the Subcommission on Insurance, chaired by Michael O. Mellinger, M.D., 12th District trustee.

Mark Bevers, M.D., 4th District trustee and member of the Executive Committee, recommended that a third field representative be appointed to enhance member communication and to provide more personal contact. This was approved by the Board and Bob Sullivan has now joined Howard Grindstaff and Sara Klein in this important activity.

The Board was pleased to present a plaque to Mrs. Dwight Schuster in appreciation for her outstanding accomplishment chairing project Med Vote for Indiana and obtaining 106 new voter registrations among physicians and their families in a state that was already politically active.

Marion County Prosecutor Stephen Goldsmith and Michael DuBois, M.D., representatives of the Governor's Task Force to Reduce Drunk Driving, requested that ISMA co-sponsor the Hoosiers Against Drunk Driving Conference August 17-18, 1985, which will bring together high school students to determine ways to reduce drunk driving by that age group. The Board approved ISMA co-sponsorship and authorized a contribution of $10,000 to sponsor 200 students.

The Board approved a $4,000 expenditure for lobbying efforts on behalf of HB 1298 and was pleased that this bill, which corrected some of the deficiencies of our Indiana Patient's Compensation Act, was enacted into law. Edward L. Langston, M.D., 11th District trustee and chairman of the Commission on Legislation, is to be commended for his leadership in obtaining this and the many other accomplishments of his commission during the year's legislative session.

The Board has considered what role ISMA should play in serving its members' and their patients' needs in regard to the variety of Alternative Health Care Systems which are proliferating in the state. President Allen has appointed an ad hoc committee, with broad representation among our membership, to consider this question and advise the Board.

Frank B. Ramsey, M.D., editor of INDIANA MEDICINE, reported regularly to the Board in the succinct, no-nonsense style we have come to expect. We thank him for the high quality of this publication which stands in the front rank of state medical association journals.

Our meetings have been graced by the presence and the reports of the Auxiliary presidents, Judy Koontz dur-

Report of the Chairman, Board of Trustees

ing the first half and Muriel Osborne the second half of the year—always a highlight of the long day's proceedings.

In the tradition begun by Dr. John A. Knote, with "Knote's Notes" and continued by Dr. Paul Siebenmorgen and "Siebenmorgen's Notes," I shall continue to send periodic reports to the membership on the Board's activities with the appellation "Mac's Facts." I hope that you find them informative and useful.

As members, you may be very pleased with the diligence and faithfulness of the ISMA officers, trustees, and alternate trustees that you have elected. I thank them all for helping make the Board an effective instrument for its purpose. On your behalf I also extend thanks to the ISMA staff who have worked superbly with the officers and Board.

You should know that each time the Board meets there are over 50 people in attendance who are dedicating most of their Sunday to a meeting that is often long and arduous, and are present to give their best efforts that the Association may accomplish its purposes as stated in Article II of its Constitution: " . . . so that the profession shall become more capable and honorable within itself and more useful to the public in the prevention and cure of disease and in prolonging and adding comfort to life."

I thank you for the opportunity to serve.—John D. MacDougall, M.D., Chairman

Report of the Chairman, Executive Committee

Referred to: Ref. Comm. 1

The following report will comprise Executive Committee meetings conducted throughout the tenure of my chairmanship, beginning with the initial meeting of the Executive Committee, Nov. 14, 1984 and continuing up through the meeting of the Executive Committee, Aug. 15, 1985. The summation of this report recognizes that there still exists three final months making up the total of a 13-month tenure for the current Executive Committee that will remain in service until the completion of activities for our 1985 House of Delegates meeting in November.

The working agenda for the Executive Committee has addressed several major initiatives, ranging from categories of legislation, membership services, public relations and future planning. As set forth in my address to the House of Delegates in October 1984, the Executive Committee has directed its attention to such areas of responsibility as establishing a dialogue with senior citizen organizations, meeting with members of the news media, and exercising a direct involvement in the political and legislative arena. Examples of the latter include Washington visitations with our congressional and senatorial officials, organizing and participating in political fund-raising activities, and serving on various special and standing committees as addressed to health-related projects in both federal and state government. The Executive Committee has directly addressed such issues as the fee-freeze extension for physicians, physician DRGs and the proposed curtailment of federal funding to medical education. The Executive Committee has also monitored the activities of our State Legislature in dealing with such subjects as the Environmental Protection Agency and our malpractice law.

NOVEMBER 14, 1984: Beginning with our first meeting of the Executive Committee, we took action on several proposals including Resolution 84-17, calling for the formation of a Hospital Medical Staff Section. I am pleased to say that the first meeting of the ISMA-HMSS is scheduled for Sept. 8, 1985 in Indianapolis and the proceedings of this meeting will be available for review at our Annual Meeting of the House of Delegates this year.

We also reviewed the Holden Public Relations Program and recommended to the Commission on Public Relations that Phase 1 of the program be re-evaluated. Other actions taken at the Nov. 14, 1984 meeting of the Executive Committee on the subject of public relations are listed and submitted for consideration of our 1985 House of Delegates as resolutions:

1. That public service Voice of Medicine spots for radio be encouraged as a joint ISMA and county program dealing with health care related public service announcements and social economic issues.

2. That the Commission on Public Relations consider development of a monetary resource fund specifically committed to "emergency media response" for fast-breaking legislative actions in our General Assembly necessitating statewide public information communicative releases, i.e., televised spot announcements.

Further action taken during the November meeting of the Executive Committee was to forward to the Board of Trustees the recommendation calling for the selection of an ad hoc committee to work out the details for a proposed seminar format addressing the subject of "alternative delivery systems." This seminar was subsequently conducted at the Airport Holiday Inn, Indianapolis, Jan. 26, 1985. The seminar was well attended and included such notable guests as Dr. John Clowe, vice-speaker of the AMA House of Delegates, who spoke during the luncheon program.

Report of the Chairman, Executive Committee

DECEMBER 12, 1984: The business of the December meeting included presentations by the chairmen of our respective ISMA commissions and committees outlining prospective agendas for the current year. The Executive Committee received these presentations with all due commendation to the members of the ISMA commissions and committees who perform the vital function of a *working ISMA* in carrying out the various assignments charged to them by the ISMA House of Delegates and Board of Trustees.

The Executive Committee also hosted presentations by representatives of PACO, the Physicians Administrative Corporation of Ohio. PACO is a for-profit corporation established by the Ohio State Medical Association. It is an affiliate of OSMA to provide strategic competitive management support of physicians in the form of practice management, office automation, and most importantly, marketing the profession by an alternative health care delivery system to the buyers of health care. This concept was to have further relevance to the Executive Committee in future meetings dealing with the concept of a physicians' service corporation for our membership.

JANUARY 9, 1985: Of the various chairmen who appeared before the Executive Committee and presented a format for their working agenda, a capsule summary of the following is appropriate:

1. COMMISSION ON MEDICAL SERVICES, MICHAEL O. MELLINGER, M.D., CHAIRMAN—Dr. Mellinger presented two projects: one regarding the charge by the Board of Trustees to form a mechanism for fee review; the second, regarding a study by Purdue University to assess a reliable system for the collection of data on adverse experiences among patients using generic or marketed drugs.

2. COMMISSION ON PHYSICIAN IMPAIRMENT, LARRY DAVIS, M.D., CHAIRMAN—Dr. Davis reported that the commission was planning a one-day workshop in the spring of 1985 for individuals elected to county hospital impaired physician committees so that they could become better informed regarding the identification, confrontation and management of the impaired physician.

3. COMMISSION ON PUBLIC RELATIONS, ADRIAN LANNING, M.D., CHAIRMAN—Dr. Lanning emphasized a concept of targeted public relations and called for a closer input and dialogue with the Indiana Federation of Older Hoosiers. Dr. Lanning also gave reference to a public relations program for the older Hoosiers which came to be known as "Healthy, Happy and Wise," a six-part series produced for public television and radio, to air in the fall of 1985. This program was to incorporate participation by members of our senior citizen community in presenting examples of health enhancement through positive examples of lifestyles that would contribute to wellness among our older Hoosiers. The program would be designed to also include information concerning social-economic issues including Medicare as well as emphasize the efficient use of medical care services in Indiana.

4. COMMISSION ON SPORTS MEDICINE, GARY PRAH, M.D. AND RONALD BLANKENBAKER, M.D., CO-CHAIRMEN—Dr. Blankenbaker appeared for Dr. Prah and presented a program which included a proposal to bring uniformity and safety regulations to amateur athletic events and made specific reference to supporting legislation which would promote educational programs for certain teachers to assist in schools where a trainer is not available. He also stated the commission would work for the establishment of a speaker's bureau of physicians who are interested and knowledgeable in sports medicine. Dr. Blankenbaker announced the future plans for the Pan-Am Games to be held in Indianapolis and called for ISMA involvement in the medical support system in this event.

Other agenda items considered during the December meeting of the Executive Committee included response to House action, Resolution 84-8, making the Resident Medical Society representative a non-voting member of the ISMA Board of Trustees, and Resolution 84-15, which provided for Resident Medical Society representation to be assigned to ISMA commissions.

It was also announced that Ken Bush, our assistant executive director, would be retiring in the spring of 1985.

During the Executive Committee meeting conducted Jan. 9, 1985, a proposal was received from Richardson-Munson and Weir to make a facility study including inspection and evaluation of mechanical systems and components to determine the physical status of our current headquarters facility. This was approved by the Executive Committee with a fiscal note of $2,800 representing the fee to be paid to Richardson-Munson and Weir for their study.

As a matter of new business, a Task Force on Alternative Delivery Systems was assigned, with Drs. MacDougall, Siebenmorgen, Shirley Khalouf and Lukemeyer as well as the chairman of the Executive Committee making up the Task Force. The initial meeting of the task force was Wednesday, Jan. 16, 1985.

FEBRUARY 13, 1985: The Executive Committee heard recommendations from the Commission on Medical Education to increase the number of scientific exhibits at our Annual Meeting. This recommendation was endorsed and referred to the Commission on Convention Arrangements. It was also recommended to the Commission on Convention Arrangements that the Section on Medical Directors and Staff Physicians of Nursing Facilities be invited to hold its meeting in conjunction with the ISMA Annual Meeting.

The Executive Committee reviewed the proposed amendments to Public Law 146 that were recommended by the Legislative Study Committee and prepared a letter that was circulated to the entire ISMA leadership, advising them of these proposed changes, and urging that physicians make their attitudes known to our state legislators by directly contacting their state representative.

MARCH 13, 1985: The Executive Committee received a visit by Woodrow A. Myers, M.D., commissioner of

the Indiana State Board of Health, who discussed with the committee priority areas of concern for the Indiana State Board of Health. These priority items included the AIDS problem, and it was announced that the new AIDS screening test offered by Abbott Laboratories would soon be utilized in our blood banking system. Dr. Myers further submitted a request that ISMA recommend a physician to serve on the Indiana State Board of Health Advisory Committee on AIDS.

Dr. Myers also discussed his intent in maintaining an input on the part of the State Board of Health in environmental affairs. He further stated that regardless of the outcome of Senate Bill 566, he intended to strengthen the Indiana State Board of Health environmental management as long as it was under his jurisdiction.

The final matter under new business was the visitation by Ken Stella, Indiana Hospital Association president, who spoke to the Executive Committee concerning his proposal of a joint venture between ISMA and IHA for the purpose of forming a statewide HMO-IPA pre-paid health care plan as an alternative to the current plans being offered throughout our state. The Executive Committee chairman instructed ISMA staff to survey the membership with the following question: "Would you be in favor of ISMA conducting a study of the feasibility of a jointly developed and sponsored statewide, prepaid health care plan, offered as an alternative to existing alternative health care delivery systems?"

APRIL 10, 1985: The Executive Committee reviewed a written critique by Mr. Foy concerning the Washington visitation, Feb. 27, 1985. It was recommended that efforts be made to put the *key contact system* into operation, at least on a federal level, with later application to the State Legislature. The congressional proposal for extension of the physician fee-freeze was the issue assigned to the key contact system.

The report of the membership survey concerning a proposal that ISMA study the feasibility of a statewide HMO-IPA plan was approved 2-to-1, with approximately 43% response to the membership survey.

The final item discussed by the Executive Committee during the April 10th meeting was the report of the ad hoc IPRO Committee appointed by the ISMA president to receive and review complaints concerning denials under the current DRG system.

MAY 8, 1985: The Executive Committee listened to a proposal concerning the possible purchase of the Foremost Insurance Building located in Keystone at the Crossing shopping center, situated on 3.5 acres of land, including a 250-car parking lot with a building that included three floors with 30,000 gross square feet, as future housing for ISMA. The Executive Committee approved the proposal for purchase and also approved earnest money of $25,000 to be offered as down payment, contingent on the acceptance by the ISMA Board of Trustees and satisfactory evaluation of the building.

In an effort to provide communications between the Executive Committee and ISMA field staff, it was recommended that field staff representatives be in attendance at the future Executive Committee meetings and present oral reports from the respective field areas.

The Executive Committee reviewed the proposal of ISMA endorsement for the Alamo Corporation Car Rental Program as a membership service, and voted favorably to endorse this program as an addition to the other rental programs now available to ISMA member physicians.

As a matter of new business, the Executive Committee considered the issue of the Medical Licensing Board proposal on chelation therapy rules. It was the consensus of the Executive Committee that ISMA forward a letter to the Indiana State Licensing Board and also secure the testimony of a physician on behalf of ISMA to speak to the issue of chelation therapy at the Medical Licensing Board hearing Thursday, July 11, 1985.

The Executive Committee welcomed Mrs. Ronald Scheeringa, ISMA Auxiliary, who presented slides explaining a program entitled, "An Early Start to Good Health," and pledged $200 to $300 in allocated monies for printing of some 2,000 pamphlets concerning the project. It was understood that the ISMA logo would be used on the pamphlets as an endorsement of the project in cooperation with the Cancer Society.

THE EXECUTIVE COMMITTEE DID NOT MEET IN JUNE 1985.

JULY 10, 1985: The first prerogative of the Executive Committee was to recognize the 83rd birthday of Dr. Frank Ramsey and extend our sincere best wishes as well as our thanks for his dedicated service to INDIANA MEDICINE as its editor.

The Executive Committee considered an offer to purchase all three pieces of ISMA property submitted by First American Trust, Inc. The proposal provided for a cash sale with a closing date of Sept. 1, 1985. The proposal included a provision for ISMA to continue in residence on a month-to-month basis for as long as one year at approximately $5 per sq. ft. The Executive Committee acted to recommend that the Board accept the offer for purchase as submitted by the First American Investment Trust Co., Inc.

The Executive Committee heard a report presented by Dr. Frank Bryan, chairman of the ISMA Commission on Medical Education, who explained the necessity for revision of the present process by which ISMA serves as a provider for continuing medical education, while at the same time is also the accreditor of such programs. Dr. Bryan recommended on behalf of the commission that the provider responsibility for continuing medical education be delegated to the ISMA Section on Directors of Medical Education—Association of Indiana Directors of Medical Education (AIDME). The Executive Committee approved the commission's recommendation to delegate provider responsibility to the ISMA Section on Directors of Medical Education/AIDME.

The Executive Committee reviewed a proposal from the Wholesale Club for an organizational membership. It was understood that the Wholesale Club would send a personalized letter to

each ISMA member with a club card, advising ISMA member physicians that they have shopping privileges (wholesale price +5%) at the Wholesale Club, located at 8301 East Washington Street, Indianapolis. The action of the Executive Committee was to approve and authorize the proposal for an ISMA organizational membership in the Wholesale Club.

One final item considered by the Executive Committee had to do with a proposal that ISMA consider the concept of purchasing stock in printed news, radio and televised media in order to establish organized medicine as a concerned investor in media policy.

In executive session, the Executive Committee reviewed staff salary structure and future staff salary requirements.

AUGUST 14, 1985: This was the final meeting of the Executive Committee at the time of this summation. At that meeting we considered primarily financial items in respect to ISMA budget.

The proposed ISMA budget was reviewed with an estimated $4,000 deficit, and the budget was approved by the Executive Committee with the following guidelines:

1. That AMA meeting expenses be discussed with the Indiana Delegation.
2. That staff obtain comparative data (of other states) regarding the operational expenses of annual meetings and AMA Delegation expenses.
3. That proportional monies be allocated to commissions and committees with across-the-board limitation on the respective proposed budgets for our commissions and committees, requesting that expenditures in excess of allocated budgets be presented in request form to the Executive Committee for prior approval.
4. That lighter meals be provided at ISMA in-house meetings and that meetings be scheduled at times when meals would not be expected.
5. That staff watch duplication of mailings and consolidate information as much as possible in INDIANA MEDICINE or *ISMA Reports*.
6. That a recommendation be made to the House of Delegates that ISMA dues be reviewed and adjusted every two years to reflect increases in the consumer price index in order to more accurately adhere to the fiscal needs of ISMA in a changing environment.

The Executive Committee reviewed the ISMA chelation therapy policy. A word of commendation was expressed regarding the impressive testimony presented by Dr. John Williams at the request of ISMA for the hearing conducted by the Indiana State Licensing Board.

The recommendations of the ad hoc Committee on Alternative Delivery Systems were presented for information to the Executive Committee. Two of these recommendations were referred to the Board of Trustees for disposition:

1. That ISMA pursue the formation and development of a separate for-profit service corporation for the purpose of providing negotiating and representative type services for ISMA physician members.
2. That ISMA consider forming a statewide IPS similar to that of the Medical Association of Georgia.

The next meeting of the Executive Committee was set for Sept. 12, 1985. At that time we will have the final report concerning our proposal for purchase of the Foremost Building at Keystone at the Crossing.

I would take this opportunity to express my feelings of appreciation to the ISMA membership, and specifically to the Board of Trustees as well as the members of the Executive Committee, for the opportunity to have chaired the vital activity of the Executive Committee during this most complex and important year for Indiana physicians. The Executive Committee will continue to convene throughout our current organizational year which will continue until our annual meeting in November in South Bend. We anticipate addressing additional pertinent issues during that remaining interim and the members of the Executive Committee would appreciate the continued input of our membership in directing our activities as we deal with those matters that confront organized medicine in the state of Indiana.—**Lawrence E. Allen, M.D., Chairman**

Convention Activities Reservations

A Convention Activities Reservations form was included with the September issue of the monthly newsletter, *ISMA Reports*.

The form includes a reservation portion for the Marriott Hotel, which is to be mailed directly to the Marriott in South Bend.

Also included are reservation requests for the IMPAC luncheon (Friday—$9 per person), the general membership reception and entertainment (Friday—$25 per person), Spouse activities (Saturday—$15 per person), and the President's Reception and Dinner (Saturday—$35 per person).

ISMA headquarters must receive all reservations not later than Monday, Oct. 28.

Reports of Trustees

All Trustee Reports are referred to Reference Committee 1.

Photos of the ISMA trustees appear on page 946.

First District

I am pleased to report to you on behalf of the First District Medical Society. It has been a year of considerable change for many of our members as well as for our medical associations at the county, state and national levels.

The majority of First District delegates were present at the ISMA convention in Indianapolis last October. We met several times to interview candidates for state office and to review proposed resolutions. We were pleased to assist Dr. Gilbert Wilhelmus in his successful campaign for AMA delegate. The 1985 state convention will be in South Bend Nov. 14-17. I know that will be a long way for us to travel, but we were glad to see South Bend physicians attend our convention in Evansville in 1983 and I'm sure they will appreciate our attendance in South Bend.

A number of First District physicians were involved in legislative efforts this year. We commend ISMA staff for an excellent job of lobbying during this recent long session of the Indiana legislature. We feel our efforts were well received by state representatives and senators.

I would like to acknowledge the commitment of Dr. Larry Allen as president of ISMA to strengthen communications between ISMA and First District. His visits to county society meetings and the Leadership Conference in February in Indianapolis were very productive.

The First District Annual Meeting was held May 16 at the Evansville Country Club. Dr. Donald Elder, president of First District, presided at the meeting. Officers elected were Jeffry C. Rendel, M.D., president; Gary Beck, M.D., vice-president; Syed Ali, M.D., secretary-treasurer; and Bruce W. Romick, M.D., alternate trustee. We congratulate winners of the Tenth Annual Bob Acre Memorial Golf Tournament. Dr. James Heinrich won low gross and Dr. Low Berry low net. I would like to thank Dr. Martin Bender for serving as golf chairman and Dr. Bryant Bloss who assisted with arrangements for our speaker. Mr. Lew Bennet of Richards Manfuacturing Company in Memphis gave a very entertaining and thoughtful talk on "Self Motivation."

It is important that we continue to be involved with our state association to represent our interests. I especially want to thank Dr. Bill Adye as he completes his term as alternate trustee. If any of you are interested in serving on commissions from the First District, please let me know.—**E. DeVerre Gourieux, M.D., Trustee**

Second District

On Aug. 30, 1984 the Second Medical District held its annual meeting in Washington, Indiana with Dr. James Beck presiding. The ISMA officers and staff informed members of current ISMA activities and issues. Owen-Monroe County Medical Society was named the 1985 meeting host. A rotation of the counties was established in the Second District as follows:

1. Owen-Monroe
2. Greene
3. Sullivan
4. Knox
5. Daviess-Martin

After the business meeting, a dinner and debate was held with the Congressional candidates, Mr. McIntyre and Mr. McCloskey.

During the past year, a physician in the Second Medical District wrote a letter asking the question, "Why should I stay in the ISMA?" This was rather distressing to me since I felt he should be asking, "Do I want to practice medicine as I have during the past 10 to 20 years?" Medicine is changing very rapidly, and probably it is safe to say, that most of these changes are and will not be to our liking. But I would like to tell you why you should "stay" in ISMA.

Most people presently feel that the practice of medicine by the sole practitioner is on its last leg. Anyone who flatly denies this probably simply is unaware of what is occurring. Competitive forces are heating up between groups in three areas:

1. Physician-hospital
2. Physician-wholesaler
3. Physician-physician

Obviously, there are advantages and disadvantages to each pairing. Negotiation, collectivism and unions are all new terms for us physicians, yet this is what is occurring. Price freezes, cost containment and care rationing are all concepts being forced upon us by government regulations and third-party payors. The average physician will not have the strength, knowledge, or time to deal with these relationships (except for possibly No. 3, and I am sure everyone else would like to see this battle take place first). The only realistic way to meet these changes and problems is through organized medicine or collectiveness. This is what organized medicine's job is and this is what the ISMA is geared up to do. Therefore, the ISMA will and must become a stronger and much more needed voice for all of us.

During the past year your ISMA trustees have dealt (note: dealt with and not won for you) with the following problems:

1. *Alternative Delivery Systems:* A poll was taken of the members and found that you were in favor, two to one, for ISMA to look into alternative delivery systems. Since it was felt best to not form a system or plan, but to act as an umbrella organization, we felt that we should not compete with the existing plans but act as a clearinghouse. We felt that ISMA should operate in a network fashion coordinating areas and serving to provide directiveness to individual physicians who needed specific information.

2. *Another ISMA Compromise:* None of us wanted it, yet it was law. So the I-PRO is still under a physician directive even as distasteful as it is. We have an ISMA-IPRO committee (your trustees) which has been meeting for mutual resolutions of common problems.

3. *New Malpractice Law:* Indiana is still the envy of the nation, yet the PCF was in jeopardy of going broke and a new law was passed this session to

make it solvent. ISMA supported it because of consideration of the alternative. The PCF surcharge will increase 75% in September and any time after Jan. 1, 1986, if the fund drops below $15 million, it can be increased by 100%. Also after Sept. 1, 1985 a patient with a complaint may commence action without submitting a proposed complaint to the Medical Review Board if he is seeking damages under $15,000.

4. *VIP:* Blue Cross/Blue Shield claimed 75% physician participation in Indiana yet nationwide they were only at 55%. Those Indiana physicians who signed up for Medicare were only 28%. Now they are espousing their own PPO.

5. *The Heartbeat Program:* This is a series of television programs on medical care from Fort Wayne which took several awards during the past year.

6. *Healthy, Happy & Wise:* This is a series of television programs which will be presented in the future as factual information about aging, fitness, nutrition, fears, safety and health. This series will feature Hoosier senior citizens as narrators.

7. *The Indiana Federation of Older Hoosiers:* Your ISMA officers and staff have held several meetings with this group concerning medical care and its costs in Indiana.

8. *AMA/ISMA Lawsuit Concerning Medicare:* This was attacked in four areas dealing with constitutionality. Judge Barker has discussed the suit and has found that the Medicare fee freeze is constitutional. This battle has really not yet begun.

I hope it is obvious from this list that you consider these activities worthwhile to the practice of medicine. If so, then again the only realistic way of dealing with these issues is on a collective basis—YOUR ISMA.

The past four years have been stimulating and I hope that I have represented the majority of the physicians' desires in the Second District. I have had great help from Dr. Wenzler, the officers of ISMA and the ISMA staff during this period. I have learned a great deal from all of them.

In July, Dr. Paul Wenzler was elected your new trustee and Dr. Jerome Melchior was elected as alternate trustee. I feel they both will very competently represent the members of the Second Medical District.

I thank all of the members of the Second Medical District for their four years of support.—**Ralph W. Stewart, M.D., Trustee**

Third District

The Third District held its Annual Meeting May 10-12 at Spring Mill State Park near Mitchell, Ind. in Lawrence County. The business session was held with a better than usual attendance for our district. Officers elected were:

PRESIDENT:
Gordon Gutmann, M.D.
SECRETARY-TREASURER:
Olegario Ignacio, M.D.
TRUSTEE:
Thomas A Neathamer, M.D.
ALTERNATE TRUSTEE:
Richard Huber, M.D.

The CME programs were held on Saturday and Sunday with poor attendance.

As your district trustee, I attempted, as usual, to give a rather thorough report of ISMA activities from the trustee's standpoint at our meeting and therefore this report is really a brief summary of some of the activities of ISMA.

The Annual Meeting this year will be held November 14-17 at South Bend and I encourage all counties to make sure they have representation present. Three counties in our district had *NO* delegate present during either session of our 1984 House of Delegates and therefore are not exercising their option for a voice in organized medicine.

ISMA has been involved and will continue to be involved in various activities; details of these will not be given, but to give you an example:

Internally: The Board of Trustees and the Executive Committee are often dealing with our own finances, staffing, purchasing of a new office building, additional field staff, etc.

Membership Services: The ISMA has provided a Leadership Conference on Coping with Alternative Delivery Systems, Physician Impairment, accreditation of CME Programs, etc.

State and National Organizations: ISMA is involved with liaison and communications with Indiana Hospital Association, Medical Licensing Board, The Federation of Older Hoosiers, Indiana State Board of Health, cosponsored a HADD conference in conjunction with the Governor's Task Force to Reduce Drunk Driving, helping with an Early Start to Good Health with the Cancer Society, state legislative lobbying, Washington, D.C. visits to our Congressional leadership, cooperation with AMA with the suit against the 1984 Medicare amendments, etc.

As your trustee, I would encourage you to get involved in our organization, read the ISMA mailings to keep yourself current with what is going on and to attend our District and Annual Meeting.

I thank you for the confidence you have placed in me for the past several years as your trustee. It has been a privilege to represent the Third District on the Board of Trustees and I encourage you to give the same support to Dr. Neathamer in the coming years.—**R. G. "Dick" Huber, M.D., Trustee**

Fourth District

The Fourth District Medical Society meeting was held at Harrison Lake Country Club. An excellent meeting was held including golf and a program for the spouses throughout the day. Many of our members attended the meeting. The ISMA representation was excellent. An Executive Committee meeting was held that day in conjunction with our meeting. Following the Executive Committee meeting, a lively open discussion was held concerning Alternative Health Care Delivery Systems.

In 1985 a new direction has been achieved in the understanding of Alternative Health Care Delivery Systems. We have found that a large number of our membership participate in various types of alternative delivery systems according to the needs dictated by the local areas. No longer are we able to

oppose or defeat the development of social systems, but instead find our members belonging to a myriad of various types of organizations. In the future it should be our state organization's goal to be able to advise and aid our members in negotiating with these various delivery systems. No longer will we be negative in our approaches toward these systems but rather, hopefully, we will be able to advise and educate our members in the advantages and disadvantages of various systems and enter negotiations in various contracts with such organizations.

Also developed this year has been a large public relations program which I hope will continue to be developed. It is through these types of programs and through our development of various alliances with other organizations, including groups representing the aging, that we will be able to better voice the goals and beliefs of our organization. However, I hope that in the future further direction will be taken in placing these public relations directives at the more grass roots level. I hope that in the future these will be able to be applied to the local county and district organizations so that they may be better utilized in the more rural areas where large urban television stations and newspapers will not be the only source of our public relations campaign.

It has been my privilege to serve as trustee again this year of the Fourth District Medical Society. I hope that in the next year I will be able to attend meetings in all the district areas. My goal in my final year as trustee includes trying to develop a better network of communication between our various local county societies.—Mark Bevers, M.D., Trustee

Fifth District

The annual meeting for the Fifth District will be held this year on Sept. 5, at the Adami's Restaurant of Clay County. Fifth District officers, Michael McCrea, M.D., Peggy Sankey-Swaim, M.D. and Kenneth Sproul, M.D., will be the hosts for this upcoming event.

Last year the District Meeting took place in Putnam County; the turnout was excellent, due to the exceptional organizational effort on the part of the host county. Paul Siebenmorgen, M.D. retired from his trusteeship after giving us six tireless years of outstanding service. Benny Ko, M.D. was elected to fill his position, having previously served for five years as the alternate trustee. Fred Haggerty, M.D. was elected as our new alternate trustee.

The practice of medicine has witnessed some drastic changes during this past year. Medical society meetings are no longer mundane social gatherings of the past but have become a forum for discussing the crises that are facing our profession today. Entrepreneurs and giant corporations are industrializing health care delivery; liberal politicians are eagerly determined to socialize it. Is professional autonomy going to survive?

By now, most physicians have become aware of the so called "alternative delivery systems" such as HMO, IPO or PPO and understand that we need to control such systems rather than be controlled by them. Lawrence E. Allen, M.D., ISMA president, recently formed a committee to address the issue of alternative delivery systems. A meeting was held on July 24, 1985. The consensus of the attendants was that ISMA should provide its membership with advice on the possibility of a physician-run and controlled statewide PPO. I feel privileged to be serving on this committee. So please expect a more concrete plan during the Annual ISMA Meeting in November.

I would like to express my deep gratitude to Dr. Siebenmorgen, my predecessor and the president-elect of ISMA, for his friendship and advice. Physicians of the Fifth Medical District are most proud of Dr. Siebenmorgen's accomplishments and are looking forward to his dynamic leadership in the state organization. I would also like to thank my alternate trustee, Dr. Fred Haggerty, for his support and counsel. The ISMA staff, notably our area field representative Miss Sara Klein, also deserve well earned applause for their professionalism and excellent service.

In closing, I urge all my colleagues to become more active in organized medicine. Only through strength and unity can we sail through the troubled waters ahead of us.—Benny Ko, M.D., Trustee

Sixth District

There have been no major changes peculiar to the Sixth District this past year. However, the general influences of the changing concepts within medical practice are as much in evidence in this district as they are in districts with more metropolitan concentration. We struggle with day-to-day changes necessary to accommodate and control as much as possible.

The Annual Meeting will be held Sept. 12, 1985 in Rushville. A timely and informative program is in place and the mailing has been distributed. We anticipate a better attendance than in the past.

Bob Sullivan of the ISMA staff has been active in the Sixth District this year. His presence has been felt by every county medical society. We really appreciate his efforts, his knowledge and his ability to relate to physicians. I feel certain that Bob will be instrumental in raising the level of interest and participation of Sixth District physicians in ISMA activities.

Finally, I wish to express my thanks to the Sixth District for the privilege of representing them as trustee for the past eight years. I have enjoyed the tenure and I am certain that I have come out ahead in the deal. Clarence (Bub) Clarkson of Richmond, alternate trustee these past six-plus years, will be a candidate for trustee at the September meeting. He has my full support.

I shall continue to support the ISMA in whatever way I can.—Davis W. Ellis, M.D., Trustee

Seventh District

The 1985 meeting of the Seventh District Medical Society was held May 14 at the Indianapolis Repertory Cabaret Theatre. Society President Donald J. Kerner, M.D., presided over the well-attended meeting.

After the minutes of the 1984 meeting were approved, H. Marshall Trusler, M.D., secretary-treasurer, reported on the financial statements which confirmed the satisfactory financial status of the society, and his report was approved.

The Society was privileged to have as guests Dr. Larry Allen, president of the ISMA, Dr. Paul Siebenmorgen, president-elect of the ISMA, Dr. George Lukemeyer, past president, Dr. Merrill Wesemann, assistant treasurer, Dr. Shirley Khalouf, speaker of the House, Dr. Fred Dahling, vice-speaker of the House, Dr. Malcolm Scamahorn, AMA delegate, and Dr. Herb Khalouf, AMA alternate delegate.

A detailed report on the activities of ISMA was presented by Dr. Lawrence E. Allen. Dr. Allen discussed ISMA legislative concerns, actions to improve internal and external communication and described ISMA's support of the Hoosiers Against Drunk Driving (HADD) Conference for students statewide.

Mr. Donald Foy, executive director, presented an up-to-date report on the state's malpractice facts and figures, how they compare with other states, and the financial status of the Patients' Compensation Fund.

A brief report on activities of the Board of Trustees was then given by John D. MacDougall, M.D., and William H. Beeson, M.D., Seventh District trustees.

Officer elections were held and John M. Records, M.D. of Franklin was elected president-elect. H. Marshall Trusler, M.D., was re-elected secretary-treasurer. Donna Meade, M.D., was elected to continue as alternate trustee. Michael B. DuBois, M.D., was elected to the other alternate trustee position.

The Seventh District has been privileged to have George Rawls serve as treasurer of the Indiana State Medical Association, Dr. Merrill Wesemann serve as assistant treasurer, Dr. George Lukemeyer serve as past president and Dr. Malcolm Scamahorn serve as AMA delegate. The Seventh District is indebted to the service and leadership which these individuals have provided, as well as that of numerous other physicians from the Seventh District who have served on various ISMA commissions and committees during the past year.

The Seventh District would like to express its gratitude to Garry L. Bolinger, M.D., our retiring alternate trustee, for his dedicated service and particularly for his leadership as chairman of the Commission on Convention Arrangements.

In the coming year, your Seventh District trustees look forward to working actively with ISMA field representative, Bob Sullivan, and Seventh District Medical Society executive director, Hal Hefner, to better serve the physicians of the Seventh District.

The members of the Seventh District share with all members of the Association the deep sense of loss we feel this year at the untimely deaths of two of our physician members who held the highest office in ISMA as president: Arvine G. Popplewell, M.D., serving two years (1979-80) and James H. Gosman, M.D., serving in 1973. The memory of their talented leadership will serve as an example and an inspiration to our future leaders for years to come.—**John D. MacDougall, M.D. and William Beeson, M.D., Trustees**

Eighth District

Before my report begins, I would like to thank our field staff for the assistance they have provided me in my first year as Eighth District trustee. I found Howard Grindstaff initially to be of considerable assistance and as districts were changed, Bob Sullivan became our field representative. Bob has also been quite helpful and I am looking forward to continuing with his assistance.

Throughout the Eighth District there have been several common denominators. Most discussion has been involved in Alternative Health Care Delivery Systems. Having assumed office in October of 1984, I have been able to attend at least one of the county society meetings in each county; the topics of discussion have varied, but the Alternative Health Care Delivery Systems seem to be top on the list. It provided considerable insight to me and I was able to bring some of the suggestions and complaints to the Board of Trustees. I feel this is important as this line of communication is essential for the survival of the organization.

The Eighth District meeting was held at Delaware Country Club on June 5, 1985. There was good attendance by staff and by members of the District. An excellent business meeting was held where presentation on Alternative Health Care Systems was given by Dr. Ned Lamkin. His presentation was extremely informative and covered the past and the present situation with the systems in an excellent manner. Discussion was lively and pertinent data were given by the president of ISMA, Dr. Larry Allen, along with other staff members.

I feel that those in attendance were much more informed when they left the meeting and had a better understanding of what faces physicians today.

As for this next year, I anticipate again being able to attend the county society meetings for criticism and recommendations. I hope that members of the district will feel free to contact me at any point considering problems or questions that they may have. **— William C. VanNess II, M.D., Trustee**

Ninth District

The events of the year make us keenly aware of the attempt by state and federal government agencies, third-party insurance carriers, and many others to standardize and regulate physicians' services and fees. Indeed, we find ourselves in a perplexing position. On the one hand, we are the benefactor of the most advanced computerized diagnostic technology, with skilled surgeons and therapists using sophisticated medications and surgical procedures for the treatment and control of diseases, yet known to man. On the other hand, we are pressured not to over-utilize these diagnostic tools and treatment procedures, lest we con-

tribute to the overall spiraling costs of medical care.

In addition, we have the constant threat of malpractice, which has caused many to practice defensively, casting aside the "art of medicine" and merely following the "criteria of current cookbook medicine."

As a result, we physicians can no longer remain isolated as we have enjoyed doing many times in the past, devoting our full time toward treatment of patients and keeping abreast of new medical discoveries. If we are to continue with any independent decisions, we must participate in every arena where medical policy is formulated. This requires active participation on the county, state and national levels. I urge each of you to attend and support your local county medical society and to contribute financially through IMPAC toward the support of candidates who will be formulating ideas and eventually passing bills that will become laws under which we must practice.

ISMA/AMA will be only as effective in defending and preserving our medical ideas as we make them through active participation and unity of purpose.—**Max Hoffman, M.D., Trustee**

Tenth District

Under the direction of our new executive secretary, Mr. Dan Hill, membership activities and services are expanding. Mr. Hill has extended administrative services to include Porter County Medical Society activities.

The annual Tenth District meeting and golf outing is scheduled for Oct. 9, 1985 at the Supervisors Club in Hobart. An eminent speaker is being arranged.

The Tenth District has announced the candidacy of Dr. C. Dyke Egnatz, current 10th District trustee, for vice-speaker of the ISMA. Drs. Thomas Tyrrell, William Sabo, Mary Carroll and Dyke Egnatz attended the Hospital Staff Section at the AMA convention in June 1985.

As HB 1548 passed the Indiana legislature in April 1985, which will require insurance companies to pay medical claims within 40 days, it was presented as a resolution by Dr. Egnatz at the AMA Reference Committee on Legislation for similar federal legislation. As several states reported variable requirements, national legislation was not regarded practical at this time.

Alternative Delivery Systems activities are multiple in the Lake-Porter County area, including sponsorship by the Lake County Medical Society. Additionally, the Lake County Medical Society will present a legal seminar Sept. 18, 1985 to apprise society members of legal matters related to their practices.—**C. Dyke Egnatz, M.D., Trustee**

Eleventh District

The past year has been a year of change for the 11th Indiana State Medical Association District. Past trustee, Dr. Herbert Khalouf, served with distinction for over eight years. As you recall, he filled the unexpired term of Dr. James Harshman who was elected president of the ISMA and then unfortunately died in an automobile accident. Assuming the role of trustee after such an exemplary gentleman as Herb Khalouf is a challenging situation for me. Jack Higgins was elected alternate trustee and has been serving with distinction since January 1985. Dr. Higgins has not missed any meetings of the Board of Trustees and served in the role as trustee during my absence in the winter of 1985. His support and participation have been greatly appreciated by me personally and I am quite sure by the District as a whole.

This has been a dynamic year. The trustees collectively decided to pursue a high profile, high visibility public relations campaign to promote the physician-to-patient relationship. This has been initiated in certain selected metropolitan areas and will become statewide over the next two or three years.

An issue of continuing concern has been the location of the Indiana State Medical Association offices. The Future Planning Committee has been working over the past two years in evaluating the current position of the offices. Through their diligent efforts an acceptable office building has been found at Keystone at the Crossing. The Board of Trustees, along with the Executive Committee, has authorized a proposal to purchase the office building. The current office building on North Meridian Street has also received a bid for its purchase. It is the Board of Trustees' desire that both of these transactions can be consummated before the end of 1985.

The annual meeting for the 11th District will be held Sept. 18, 1985 at the Kokomo Country Club. It is hoped that a large representative portion of the membership will be able to participate.

It has truly been a pleasure to represent ISMA members in the 11th District on the Board of Trustees.—**Edward L. Langston, M.D., Trustee**

Twelfth District

1985 has been another eventful year in Indiana medicine. Many of us had feared opening up the Indiana malpractice law and yet it was obvious that certain changes had to be made if it was to survive.

An atmosphere of medical malpractice crisis existed (and still exists) nationally, where premiums of upward of $50,000 for certain specialties in certain states had become commonplace. The Indiana Trial Lawyers Association was clamoring for an increase in the $500,000 cap. The Patient's Compensation Fund (PCF) was essentially depleted. Only a few years earlier the PCF had boasted a balance in excess of $12 million. Many other special interest groups were urging changes which would have further fragmented the law.

Anticipating the battle in this arena, the ISMA redoubled its efforts to be heard prior to the legislative session. We took on two full-time staff members to serve exclusively in legislative matters.

Our efforts were amply rewarded: The $500,000 cap remains in tact and unchanged. New legislation allows the PCF to spread payments over a period of time. The insurance carrier will expend $75,000 *before* any monies can be paid out of the fund. Although the PCF

surcharge has increased to 75% of base premium, there is room for optimism here, too. Many of us have felt that incrementally increasing the surcharge is a bandaid approach doomed to perpetuate itself until someone attacks the basic problem that the PCF is without protection or management. For the first time legislation is in place to allow the insurance commissioner to hire insurance experts to manage the PCF. Hopefully, this move will decrease inappropriate penetration of the fund.

As venture capital becomes more prominent in health care, we are seeing more and more clinical type decisions (when and if to hospitalize, length of stay, etc.,) being made not by physicians but by business interests. For several years the hospital-employed physicians has felt the lack of power to deal with the government and business interests. Now, the fee-for-service private practitioner is feeling the same impotence as the business sector moves into competition for the private patient.

How to deal with this erosion of power is the biggest challenge facing medicine today. If we are to act in the best interest of our patients, we must have some say in how they are cared for. What course ISMA should follow will be addressed at length at the meeting in November.

As of this writing, Massachusetts just became the eighth state (along with Hawaii, Oregon, California, Arizona, Utah, Colorado and Michigan) to organize a separate corporate entity and call it a union. Georgia has formed a statewide IPA and Florida is studying the possibility. What course we elect to follow in Indiana will affect our practices for many years.

All change is painful, but with change comes opportunity. We have the opportunity to act together without factionalism, more now than at any time in my professional lifetime.

On Sept. 19, 1985, the Twelfth District Medical Society met at the Grand Wayne Center at Fort Wayne. Harrison Rogers, AMA president, was featured as speaker.

I have enjoyed serving as the Twelfth District trustee, and look forward to doing so in the future. Your comments, suggestive or critical, are always welcome.—**Michael O. Mellinger, M.D., Trustee**

Thirteenth District

The Thirteenth District Medical Society held its 1984 annual meeting at the Knollwood Country Club in South Bend, Ind. The meeting was well attended and the usual dignitaries from the State Medical Association were present. Many problems of future medicine were discussed by then-president-elect, Doctor Larry Allen, and then-president, Doctor George Lukemeyer.

Doctor Michael Thomas of Elkhart was elected president-elect for 1986. Doctor Bienvenido Ticsay of Michigan City was elected president for 1985. Doctor Donald Smith of South Bend was reelected secretary of the Thirteenth District Medical Society.

The first board meeting of the Indiana State Medical Association was Nov. 19, 1984 and the problems facing future medicine were discussed by Dr. Lawrence Allen of Anderson. Dr. Allen's proposal was to create a subsidiary corporation to provide marketing information and service for the ISMA membership. Another program set up by the Commission on Public Relations was the development of an outreach program for Indiana senior citizens. This was funded from the dues of ISMA members and the program has become available in 1985 in the television areas of Evansville, Louisville, Indianapolis, Terre Haute, South Bend and Lake County, Indiana. Money was also appropriated for senior citizen outreach programs through local radio stations in Indiana.

Dr. Allen has worked hard to implement the formation of a hospital medical staff section and the first meeting of this section will be held in Indianapolis on Sept. 8, 1985.

At the first board meeting of 1985, held on the last Sunday in January, I became very busy due to the actions of this meeting. At this meeting, I presented the problems of the physician in the northern part of Indiana with the retroactive denials of Medicare admissions by the Indiana PRO. Because of these problems, in which the patients were being denied payments to the hospital after they were discharged, an ad hoc committee was formed by Dr. Allen consisting of Doctors Luce and Beeson as co-chairmen and three other trustees. The next day I contacted Dr. Paul Muller, the medical director of IPRO, and a meeting was set-up to be held on Feb. 6, 1985 at the Holiday Inn in Plymouth, Ind. This meeting was attended by Doctor Muller, Doctor Santare, a member of the Board of IPRO, Doctor Halaby, the medical director of Indiana Foundation for Medical Care, Inc (I-PRO subcontractor), Doctor Tom Roberts, chairmen of the DRG Committee at St. Anthony Hospital in Michigan City, Ron Dyer, ISMA Legal Counsel, Tom Hanstrom, the executive secretary of the State PRO, and Michael Clapan, executive secretary of the Indiana Foundation for Medical Care, Inc. (IPRO subcontractor). At this time, we had an interfacing of the problems between the physicians and the IPRO organization. Some of these problems included the time element between the time the patient's admission was denied and the response time by the physician in appealing the denial. Doctor Halaby stated that he would try to get the charts back to the physicians quicker because by Federal law as administered by HCFA, they were allowed only 15 days to complete the process. We stated that we felt this was a short period of time to have the chart denied, inform the physician and have a letter written back to the IPRO organization to appeal the denial.

I sent letters to all county presidents in the northern tier of the state controlled by Fort Wayne IPRO asking them to send me their complaints with the waiver of denials. My office was flooded with letters and phone calls from chiefs of staffs complaining about the problem. It has been an experience of trying to make sense of what IPRO is doing. As of July 31, 1985, 74% of the hospitals in the northern 33 counties have lost their waiver of denial and

79% of the southern third hospitals have lost their waiver of denial. Less than 30% of the central Indiana hospitals have lost their waiver of denial. I have asked for a meeting with Doctor Muller concerning the discrepancy in these figures and he is to have a meeting with the co-chairman of the ad hoc committee, Dr. William Beeson of Indianapolis, to present the figures and the reasons for these figures. The committee hopes to reach some sort of solution of this problem with IPRO and make the process of DRGs more palatable for the physicians and hospitals in the state of Indiana.

The State Medical Association contributed $10,000 to help sponsor the statewide program by Governor Orr and Stephen Goldsmith, Marion County prosecutor, on Hoosiers Against Drunk Driving (HADD). This program would send two students from each high school in Indiana to Indianapolis on Aug. 17th and 18th for a meeting to promote safe driving and no drinking in the high school age group. The county societies were asked to help sponsor the students and the response in the Thirteenth District was excellent.

In March the Board of Trustees was given a proposal as to the possibility of moving the ISMA headquarters from its present site on North Meridian Street to three different areas. They were also given the accounting sheets as to what would be the best thing to do, i.e., to rent, to buy, or to build a new building. These were studied carefully and the proposal came in June to buy the Foremost Building in the Keystone at the Crossing Shopping Center. This building would satisfy our needs and also allow the possibility of renters to help defray expenses. Early in July the State Association received an offer to buy the present headquarters on North Meridian and the Board of Trustees also voted to buy the Foremost Building and to sell the present site for a price that was very close to the appraised value of the building.

The Commission on Legislation worked hard; however, PL96 passed the legislature, increasing the surcharge. This is the Patient Compensation Act of 1975. The total number of complaints of medical malpractice increased in the state of Indiana another 10% in 1984 for a total of 684 complaints. Only 35 of these cases have been closed, leaving 649 cases yet to be resolved. Of course, there are other cases from previous years that still have not been resolved and the Patient's Compensation Fund is bankrupt. With this in mind, the State Legislature has increased the surcharge to 75% and probably will go to 100% next year. The only way to decrease the number of malpractice cases is for doctors to become more aware of the problem and communicate with their patients. As stated by one of the prominent lawyer-physicians in this country, "the number one cause of malpractice is malpractice."

The medical student section charter has been presented to the student medical section of the ISMA and Dean Beckman is now the student delegate to the ISMA.

I have continued this year to send letters to all county medical society presidents in the district after each board meeting to keep them abreast of what is happening at the state level. It has been a very busy year for me and I hope that the efforts put forth by myself, other members of the IPRO ad hoc committee, and the Board of Trustees will be rewarded with a better climate to practice medicine in the state of Indiana. I look forward to serving on the Board for my third year in 1986 with President Doctor Paul Siebenmorgen.—John W. Luce, M.D., Trustee

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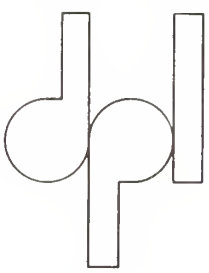
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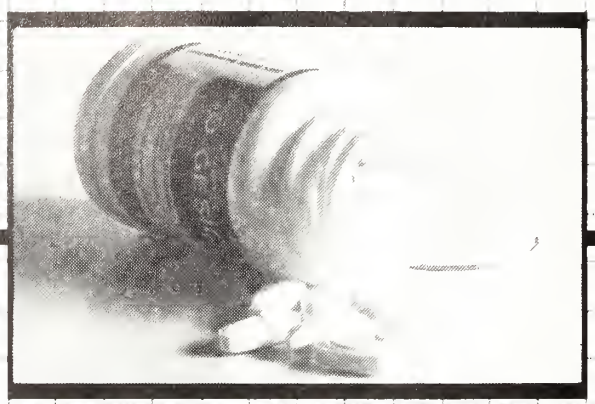
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NEWS NOTES

New ISMA Members

The following physicians were welcomed in July as new members of the Indiana State Medical Association:

James S. Bain, M.D., Wabash, family practice.

Douglas K. Bullington, M.D., Franklin, family practice.

Peter M. Carney, M.D., Elkhart, neurology.

Don S. Dunevant, M.D., Portage, family practice.

Tim H. Emory, M.D., South Bend, diagnostic radiology.

Bryan E. Flueckiger, M.D., Elkhart, psychiatry.

Deborah K. Goldman, M.D., Evansville, pediatrics.

Kirby R. Gross, M.D., Elkhart, general surgery.

John A. Hawkins, M.D., Goshen, internal medicine.

Gary R. Hazlett, M.D., Muncie, internal medicine.

Richard G. Huss, M.D., Muncie, radiology.

Ronald W. Louks, M.D., Dunkirk, internal medicine.

Susan M. Martin, M.D., Evansville, family practice.

John E. Moran Jr., M.D., Evansville, family practice.

Subba R. Naqubadi, M.D., Valparaiso, urological surgery.

John W. Oren, M.D., South Bend, general surgery.

Wesley W. Ratliff, M.D., Bloomington, internal medicine.

Stephen L. Rose, M.D., Evansville, pathology.

Michael E. Seidle, M.D., Muncie, family practice.

Karl W. Sorenson, M.D., Huntingburg, general surgery.

James M. Stearns, M.D., Evansville, ophthalmology.

Thomas E. Strayer, M.D., Anderson, ophthalmology.

Rose A. Wenrich, M.D., Wabash, family practice.

Gayland Yee, M.D., Dale, family practice.

Residents

Deborah M. Alcorn, M.D., Indianapolis, pediatrics.

John D. Ayres, M.D., Indianapolis, internal medicine.

Michael W. Ball, M.D., Indianapolis, cardiovascular diseases.

Robert O. Bigler, M.D., Grand Rapids, Mich., general surgery.

Paranita Bratton, M.D., Indianapolis, family practice.

Leona E. Cross, M.D., Indianapolis, family practice.

Terrence J. Drake, M.D., Indianapolis, internal medicine.

Ricardo C. Hood, M.D., Gary, family practice.

John M. Jacobs, M.D., South Bend, family practice.

Lydia K. Mertz, M.D., Bristol, family practice.

Logan E. Miller, M.D., Griffith, family practice.

James D. Miner, M.D., Indianapolis, otorhinolaryngology.

Lisa E. Naviaux, M.D., Indianapolis, internal medicine.

Robert B. Pauszek Jr., M.D., Indianapolis, psychiatry.

Peter V. Sefton, M.D., Greenwood, family practice.

Curtis E. Shinabarger, M.D., Indianapolis, otorhinolaryngology.

Joan K. Szynal, M.D., South Bend, physical medicine and rehabilitation.

Nicki C. Turner, M.D., Muncie, internal medicine.

Correction

Dr. Wesley B. Wong's medical specialty was incorrectly identified as "oncology" in the August listing of "New ISMA Members." Dr. Wong, Indianapolis, specializes in neurology.

Indianapolis Physician Wins Mills Award



Dr. John H. van de Leuv, medical director of Methodist Hospital of Indiana's Emergency Medicine and Trauma Center, has received the American College of Emergency Physicians' James D. Mills Award for significant contributions to emergency medicine.

Dr. van de Leuv is a founding member of the American College of Emergency Physicians; in 1972, he founded and served as editor of the Journal of the American College of Emergency Physicians, now called *Annals of Emergency Medicine*. He is now a member of its editorial board. He also is associate editor of two books on emergency department organization and management.

IHHS Now Offering Home Health Care

Indiana Home Health Services (IHHS) is now offering a full range of home health care services and products to residents of Indiana. Methodist Hospital of Indiana has joined American Medical International, Inc. and a physicians' group, New World Associates, in a joint venture to provide this service.

IHHS, located in Indianapolis, is certified as a Medicare/Medicaid home health care provider and is licensed by the Indiana State Board of Health.

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NEWS NOTES

Courts Deny Minor Waiver of Parental Consent to Abortion

A trial judge did not use improper standards in determining the maturity of a minor who sought waiver of parental consent to an abortion, the Indiana Supreme Court has ruled.

The 16-year-old girl had had an abortion with her parents' consent about six months previously. Her reason for not wanting them to know of the second pregnancy was that it would have an adverse effect on their relationship with her. She said that birth control had been explained to her but that she thought her parents would not approve of it.

The Supreme Court affirmed the trial court's denial of the waiver.—*In re the Matter of T.P.*, 475 N.E. 2d 312 (Ind. Sup. Ct., March 22, 1985) (*Courtesy of The Citation, Aug. 1, 1985*)

Director Named for New Research Institute

Dr. Mason R. Goodman, Indianapolis, has been named medical director of the new Walther Medical Research Institute, which was recently endowed with an initial sum of $33 million.

The Institute comprises three endeavors: The Walther Oncology Center, the Winona Foundation and the Mary Margaret Walther Oncology Care and Research Center.

Dr. Goodman, a clinical assistant professor of medicine at I.U. School of Medicine, was recently medical director of Winona Memorial Hospital.

CT Screening Proves to be Cost Effective

A cost effective study recently conducted at the Bronx Municipal Hospital Center showed a decrease in emergency skull radiographs when specific guidelines were instituted. Over the same period CT scanning increased while radiographs decreased.

A savings of $164,000 ($13,000 a month) was accomplished, thus confirming the prediction that implementing a diagnostic scheme based on CT would result in savings without missing one case of significant intracranial disease.

The use of restrictive guidelines now casts doubt on the value of skull films as a screening procedure for all patients with head trauma, it was concluded.

For the Asking . . .

• **The Medical Practice Letter**, in the 12-page June-July 1985 issue, covers many tough problems in medical practice. Examples: "Coping with Competitive Medicine: Case Manager vs. Gatekeeper," "PRO Review—What It Means for Physicians," and "Medicare: Early Hospital Discharge Problem." A stated opinion about what will ensue if DRGs are terminated because of perceived abuse could well be worth the back issue price of $12. Write The Medical Practice Letter, 227 Everit St., New Haven, Conn. 06530.

• **The American Society of Internal Medicine** has published and now offers for sale a series of brochures on subjects of practical interest to patients, especially elderly ones. They are: "Medicare: What It Will and Will Not Pay For"—$20 per 100; "Thinking About a Nursing Home?"—$30 per 100; "Staying Healthy as You Get Older"—$16 per 100; and "Communication: It's Good for Your Health"—$20 per 100. Larger orders are discounted and members of ASIM get a 10% discount. Physicians may receive a free copy of each brochure by sending a self-addressed, stamped legal-size envelope to ASIM Literature Order Dept. MP, 1101 Vermont Ave., N.W., Suite 500, Washington, D.C. 20005.

• **"Obstetric Anesthesia: A Guide to Pain Relief During Childbirth"** is the title of a new report by the American Council on Science and Health. The 32-page booklet discusses all elements of the subject. The author concludes: a) For most of the drugs and procedures currently used, including narcotics, epidural block, spinal anesthesia and pudendal block, the risks are very small; b) paracervical block and inhalational anesthesia carry somewhat higher risks and are no longer used routinely in most hospitals; and c) inhalational anesthesia is still appropriate in some situations, such as emergency cesarean deliveries. For a complimentary copy, send a stamped (39¢), self-addressed #10 envelope to Obstetric Anesthesia Report, ACSH, 47 Maple St., Summit, N.J. 07901.

• **The Food and Drug Administration** is likely to approve food irradiation for a variety of purposes later this year. Whether consumers will also approve of this new technique remains uncertain. The treatment of foods with ionizing radiation such as gamma rays has been shown to be safe after a systematic, comprehensive scientific testing program, according to "Irradiated Foods," a report published by the American Council on Science and Health, an independent scientific organization. For a complimentary copy of the report, send a stamped (39¢), self-addresed #10 envelope to Irradiated Foods Report, ACSH, 47 Maple St., Summit, N.J. 07901.

• **"Medical Malpractice Verdicts, Settlements & Experts"** is a new monthly newsletter covering malpractice trial court developments. It is being introduced by including a "Directory of Medico-Legal Consulting Firms, 1985 Edition" with a charter subscription that sells for a charter rate of $197, a savings of $50 over the eventual price. Write to M. Lee Smith, Publishers & Printers, P.O. Box 2678, Arcade Station, Nashville, Tenn. 37219.

"Facts You Should Know About Outdoor Cooking" is the title of a recently published booklet now made available by the American Institute of Cancer Research. It offers suggestions so that no one should have to totally give up the enjoyment of outdoor cooking in order to lower cancer risk. Single copies are available by sending a self-addressed, stamped, business-sized envelope to AICR, Dept. OC, P.O. Box 76216, Washington, D.C. 20013.

Here and There . . .

Dr. Donald E. Kerr of Bedford has completed a "mini-fellowship" in rheumatology at the I.U. School of Medicine; the 40-hour program is being offered by the school's Rheumatology Division.

Dr. Davis W. Ellis of Rushville, an ISMA trustee, has been named medical director of Indiana's Medicaid program.

Dr. Hugh C. Hendrie, chairman of the Dept. of Psychiatry, I.U. School of Medicine, was among the speakers at a day-long conference on Alzheimer's Disease last month in Evansville; it was sponsored by the Gerontology Center, University of Evansville.

Carolyn Scruggs, executive director of the Vanderburgh County Medical Society for the past five years, has assumed new duties as executive director of a county medical society in Charlotte, N.C. A successor has not yet been named.

Dr. John E. Joyner of Indianapolis has been re-elected chairman of the board of trustees, National Medical Association.

Dr. Roscoe Henderson of Indianapolis received the "General Practitioner of the Year" award during the annual meeting of the National Medical Association.

Dr. Anthony R. Dowell of Muncie has closed his private practice there; since Sept. 1, he has been with the Eli Lilly Research Laboratories in Indianapolis engaged in clinical investigation.

Drs. Fred Adler, Titu Aron, Ali O. Kheirbek and Y.M. Kim have completed an Advanced Cardiac Life Support Instructor's Course for physicians, offered by St. Catherine Hospital, East Chicago; as a result, they have been accredited by the American Heart Association.

Dr. Ted L. Grisell is the new chairman of the American Board of Abdominal Surgery.

Drs. Robert E. Rogers and **James E. Sumners** of Indianapolis gave lectures at the Family Practice Update 1985, presented in July by the Indiana Academy of Family Physicians. Dr. Rogers discussed the "Abnormal Pap Smear," and Dr. Sumners discussed "Vaginitis."

Dr. Lewis E. Morrison of Indianapolis discussed "Normal and Abnormal Anatomy of the Nose" during the International Seminars held in Paris in August.

Dr. John J. Saalwaechter of Lebanon became medical director of the Medicaid Division, Blue Cross-Blue Shield of Indiana last month.

Dr. Loren E. Jinnings, an Auburn family physician, has retired after 56 years of practice.

Dr. Susan M. Anderson of Indianapolis is the new medical director of the Cummins Mental Health Center; she was previously director of psychiatry services at Metro Health in Indianapolis.

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FAMILY PRACTICE PHYSICIAN—To join small group of young family practitioners in north central Indiana university community. Established practice all encompassing (pediatrics, OB/Gyn, geriatrics, medicine and minor surgery). Community offers variety of amenities. Guaranteed income plus benefits. Contact: Carol Bryan, Spring Creek Road, Rt. #2, Box 61, Barrington Hills, Illinois 60010—(312) 382-1298.

INDIANA, NORTH OF INDIANAPOLIS: Immediate full-time position in newly renovated emergency department. Hourly salary, flexible scheduling, malpractice insurance provided. Locum tenens opportunities also available. For more information, contact: Emergency Consultants, Inc., 2240 South Airport Road, Room 20, Traverse City, MI 49684; 1-800-253-1795 or in Michigan, 1-800-632-3496.

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DIRECTOR OF INPATIENT PSYCHIATRIC SERVICES—Psychiatric Services Division of 152-bed general hospital offers immediate opportunity to Board-eligible or certified Psychiatrist to serve as Director of Psychiatric Inpatient Services. Responsibilities include: Diagnosis, treatment and disposition of inpatient clientele; supervision of professional staff; development of clinical services; consultations; evaluations and forensic services. Work in the progressive atmosphere of our $5.1 million Psychiatric wing due to open in the fall of 1985. Enjoy a liberal fringe benefit package which includes health, dental and life insurance and a generous non-contributory pension program. Salary range is approximately $65,000 to $100,000 commensurate with experience. Contact: Steven W. Adrianse, Director of Personnel Services, or Dr. Robert Adams, Medical Director/Psychiatric Services, Howard Community Hospital, 3500 S. Lafountain, Kokomo, IN 46902—(317) 453-8560. EOE M/F/H.

STAFF PSYCHIATRIST—Immediate opening for full-time staff psychiatrist (Bd. elig./cert.) to join full-time medical director at developing CMHC in Indianapolis area. Inpt., outpat., consult., and day hosp. svc. I.U. Med. Ctr. in nearby Indpls. Competitive sal. and bnfts. Reply to Susan M. Anderson, M.D., Medical Director, Cummins MHC, P.O. Box 158, Danville, IN 46122.

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PSYCHIATRIST—Psychiatric Services Division of general hospital offers part-time contract hours to Board-eligible or certified Psychiatrist at satellite offices located in Frankfort and Tipton, Indiana. Qualified candidates may contact Steven W. Adrianse, Director of Personnel Services, or Dr. Robert Adams, 3500 S. Lafountain, Kokomo, IN 46902—(317) 453-8560. EOE M/F/H

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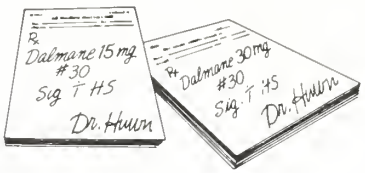
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USPS 284-440
ISSN 0746-8288

OFFICE OF PUBLICATION:
3935 N. Meridian St.,
Indianapolis, Ind. 46208
Tel: (317) 925-7545

INDIANA MEDICINE (ISSN 0746-8288) is published monthly by the Indiana State Medical Association. Second-class postage paid at Indianapolis, Ind.

POSTMASTER: Send address changes to INDIANA MEDICINE, 3935 N. Meridian St., Indianapolis, Ind. 46208.

Yearly subscription rates: $20 domestic, $22 Canada, $23 foreign. Library rates: $18 domestic, $20 Canada, $21 foreign. Senior ISMA members and full-time medical students—$10. Single copies not available. Subscriptions renewable only in January and July.

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ABOUT THE COVER

"Healthy, Happy and Wise" is a series of public education television programs produced by the ISMA designed to provide information to senior citizens about how to maintain a healthy lifestyle. The half-hour programs aired on PBS this fall. A mini-series of commercial news broadcasts is being aired this month. A special article about the series appears in this issue.

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1A. TITLE OF PUBLICATION	1B. PUBLICATION NO.	2. DATE OF FILING
INDIANA MEDICINE	0 7 4 6 8 2 8 8	Sept. 19, 1985
3. FREQUENCY OF ISSUE	3A. NO. OF ISSUES PUBLISHED ANNUALLY	3B. ANNUAL SUBSCRIPTION PRICE
Monthly	12	$20.00

4. COMPLETE MAILING ADDRESS OF KNOWN OFFICE OF PUBLICATION *(Street, City, County, State and ZIP+4 Code) (Not printers)*

3935 N. Meridian St., Indianapolis, Marion, Indiana 46208

5. COMPLETE MAILING ADDRESS OF THE HEADQUARTERS OF GENERAL BUSINESS OFFICES OF THE PUBLISHER *(Not printer)*

3935 N. Meridian St., Indianapolis, Marion, Indiana 46208

6. FULL NAMES AND COMPLETE MAILING ADDRESS OF PUBLISHER, EDITOR, AND MANAGING EDITOR *(This item MUST NOT be blank)*

PUBLISHER *(Name and Complete Mailing Address)*

Indiana State Medical Association
3935 N. Meridian St., Indianapolis, IN 46208

EDITOR *(Name and Complete Mailing Address)*

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MEDICAL MUSEUM NOTES

CHARLES A. BONSETT, M.D., Indianapolis

THIS MONTH'S PAGE of NOTES is again concerned with Dr. Frank B. Wynn (1860-1922). Dr. Wynn was one of Indiana's foremost diagnosticians, and he was a prolific writer. His contributions to the *The Journal of the Indiana State Medical Association* (among other journals) were numerous, and covered a wide variety of medical subjects. These articles are easily located. More difficult to find are his writings relating to his non-medical avocations. This page features an abbreviated example of one such article, which was published in the Volume V Number 4 issue of the *Mazama—A Record of Mountaineering in the Pacific Northwest* (pages 343-346), 1919:



Mountain Climbing in Glacier Park

". . . Glacier Park is characterized by its Indians, . . . superb mountain scenery—rugged peaks, wonderful lakes, forests, glaciers, and flowers, strikingly like the Tyrolese Alps . . . It is *par excellence* the hiker's paradise. . . .

"But it is chiefly as a rendezvous for mountain climbers that I wish to consider Glacier Park. . . . Until this year (1919) not a single record box had been placed upon any summit. . . . Six years ago I made the ascent of Mount Jackson, and this year I was resolved to climb 'Going-to-the-Sun Mountain,' or 'Sun' Mountain as it is commonly called. . . . On two previous visits to the region I had been upon the west, south, and east sides of the peak, and was convinced that these approaches were impossible. It was therefore decided by our little party (Sidney F. Daily, Daniel Boone Clapp and Frank B. Wynn) that we would make the attempt from the north side. We estimated the total distance from 'Sun' chalets and return would be 30 miles. To conserve our strength for the climb we took horses to the timberline on the north—nine miles. This approach presented a cirque of many narrow ledges and sliding shale. In the morning we had noted a goat feeding high upon these ledges. We made satisfactory progress until one o'clock, when the lead brought us up against sheer walls. We made several attempts up chimneys, each of which brought us to a precipitate jump-off of 3,000 feet down upon Sexton Glacier. This was our situation at three o'clock, when it was decided that we would have to abandon the climb for the day. The other two gentlemen went on down, leaving me to reconnoiter for the subsequent attempt. I followed a narrow ledge for a half-mile, around to where we had seen the goats in the morning. Here another chimney was found, which I believed negotiable. The other two men were too far away to hail, and the hour was too late to overtake them and bring them to this point of attempt. So I determined, contrary to mountain rules, to try it alone. The chimney was steep, and at several points, difficult to negotiate. Many times I wished for a rope and somebody to give me a boost. Aside from a disfigured camera, and some tremulousness incident to the physical strain, I reached the summit without mishap. There was, of course, great joy in the achievement but sadness over the fact that I had not my colleagues with me.

"The top of 'Sun' Mountain is a well weathered plateau, in the center of which is a huge pile of disintegrating rocks quite similar to the pinnacle found upon the summit of Shasta. . . . There was no evidence anywhere of any former climber. I built a cairn, placed the Mazama Record Box within it, and chained the box to a large upright stone. Then placing my mountain stick by the cairn and my hat upon it, I took a photograph as the only evidence in proof of the ascent."

FUTURE FILE

AMA Marketing Strategies

"Marketing Strategies for Private Practice" is the topic of an AMA practice management workshop to be offered in conjunction with the ISMA annual meeting at the Century Center in South Bend on Saturday, Nov. 16.

The workshop will cover how the basic concepts of modern marketing can be applied to medical practice. For more information on registration of physicians and staff for this six-hour workshop, please contact Carol Ann Cunningham at ISMA Headquarters.

Critical Care Medicine

The 15th Annual Society of Critical Care Medicine Educational and Scientific Symposium meets May 27-30, 1986, in Washington, D.C. The program is prepared for Critical Care physicians, nurses, therapists and scientists. AMA Category 1 credit is 40 hours.

The correspondent is Tracy Schultz, 223 E. Imperial Highway, Suite 110, Fullerton, Calif. 92635—(714) 870-5243.

Cleft Lip and Palate

"Surgical Techniques in Cleft Lip and Palate" will be the subject of the Annual Course of The Institute of Reconstructive Plastic Surgery, to be conducted Dec. 2-6 at the New York Marriott Marquis Hotel, New York City.

The course carries 30 AMA Category 1 credit hours. Tuition fee is $650, with a $200 discount for physicians in training, upon certification from their chief of service.

The correspondent is Joseph G. McCarthy, M.D., New York University Medical Center, 550 First Ave., New York, N.Y. 10016—(212) 340-5208.

Smokeless Tobacco

A Consensus Development Conference on "Health Implications of Smokeless Tobacco Use" will be held Jan. 13-15, 1986, in the Masur Auditorium at the National Institutes of Health Clinical Center, 9000 Rockville Pike, Bethesda, Md.

The *Journal of the American Medical Association* publishes a list of CME courses for the United States twice yearly. The January listing features courses offered from March through August; the July listing features courses offered from September through February.

Pathology Annual Meeting

The Annual Meeting of the United States-Canadian Division of the International Academy of Pathology will be held at the New Orleans Hilton, March 10-14, 1986.

Further information about the meeting and courses is available from Dr. Nathan Kaufman, Bldg. C, Suite B, 3515 Wheeler Road, Augusta, Ga. 20909—(404) 733-7550.

Indiana University CME

For the Primary Care Physician

Nov. 20—Medical Management of Ventricular Arrhythmias, Indianapolis.

For the Specialist

Dec. 13—Rhinoplasty: Indiana Classic, Bloomington.

For additional information, contact the CME Division, I.U. School of Medicine—(317) 264-8353.

Rheumatology Fellowship

Date negotiable—Mini-Fellowship in Rheumatology. Offered by Rheumatology Div., Dept. of Medicine, I.U. School of Medicine; for general internists, family physicians, general practitioners; 40-hour instructional program at I.U. Medical Center; 5 consecutive days, or other arrangements; program helps attain skills for effective office management of common rheumatologic problems, interpretation of relevant laboratory tests and techniques for joint aspiration and local soft tissue injection; includes experience with "team approach" to management of the arthritic patient.

Call K. Brandt, M.D., Rheumatology Div., I.U. School of Medicine—(317) 264-4225.

Heart Diseases

The 5th Annual Conference on Heart Diseases will enlarge the subject: "Imaging Comes to Cardiology" when it meets at the Wisconsin Center in Madison Dec. 6-7.

AMA Category 1 CME credit is 12 hours; AAFP prescribed credit is 9½ hours. The correspondent is Sarah Z. Aslakson, 465B WARF Bldg., 610 Walnut St., Madison, Wisc. 53705—(608) 263-2856.

Anatomical Workshop

"Surgery for the Aging Face: Focusing on the Issues" is the subject of a symposium and anatomical workshop to be held Jan. 30 to Feb. 2, 1986, at the Hotel Inter-Continental on the Embarcadero, San Diego, Calif.

It will be devoted to the unresolved issues confronting the surgeon who cares for the aging face deformity. Fees are $295 for surgeons, $195 for residents in training, nurses and office assistants. The anatomical workshop is limited to 125 attendants and the fee is $60.

For more information call UnConventional, Inc. at (619) 692-9115.

Assembly in Surgery

The 9th Annual San Diego Postgraduate Assembly in Surgery will meet Jan. 20-24, 1986, at Hotel Intercontinental-San Diego. AMA/CMA credit is for 32 hours.

Write or call the Office of CME, M-017, UC San Diego School of Medicine, La Jolla, Calif. 92093—(619) 452-3940.

Infectious Diseases

"Update in Infectious Diseases 1985" will be the subject of a CME course at the University of Wisconsin Clinical Science Center in Madison, Nov. 21-23. AMA Category 1 credit is 19 hours; AAFP credit is pending.

Contact Sarah Z. Aslakson, 465B WARF Bldg., 610 Walnut St., Madison, Wisc. 53705—(608) 263-2856.

Angina comes in many forms...

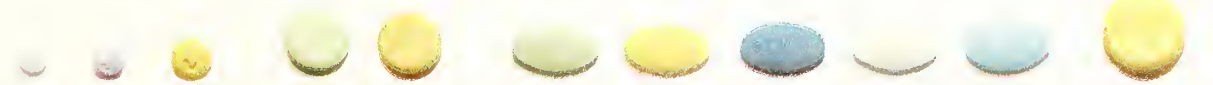


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40 mg
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See following page for brief summary of prescribing information.

SORBITRATE
(ISOSORBIDE DINITRATE)

Please consult full prescribing information before use. A summary follows:

INDICATIONS AND USAGE: SORBITRATE (isosorbide dinitrate) is indicated for the treatment and prevention of angina pectoris. All dosage forms of isosorbide dinitrate may be used prophylactically to decrease frequency and severity of anginal attacks and can be expected to decrease the need for sublingual nitroglycerin.

The sublingual and chewable forms of the drug are indicated for acute prophylaxis of angina pectoris when taken a few minutes before situations likely to provoke anginal attacks. Because of a slower onset of effect, the oral forms of isosorbide dinitrate are not indicated for acute prophylaxis.

CONTRAINDICATIONS: SORBITRATE is contraindicated in patients who have shown purported hypersensitivity or idiosyncrasy to it or other nitrates or nitrites. Epinephrine and related compounds are ineffective in reversing the severe hypotensive events associated with overdose and are contraindicated in this situation.

WARNINGS: The benefits of SORBITRATE during the early days of an acute myocardial infarction have not been established. If one elects to use organic nitrates in early infarction, hemodynamic monitoring and frequent clinical assessment should be used because of the potential deleterious effects of hypotension.

PRECAUTIONS: General: Severe hypotensive response, particularly with upright posture, may occur with even small doses of SORBITRATE. The drug should therefore be used with caution in subjects who may have blood volume depletion from diuretic therapy or in subjects who have low systolic blood pressure (eg, below 90 mmHg). Paradoxical bradycardia and increased angina pectoris may accompany nitrate-induced hypotension. Nitrate therapy may aggravate the angina caused by hypertrophic cardiomyopathy.

Marked symptomatic orthostatic hypotension has been reported when calcium channel blockers and organic nitrates were used in combination. Dose adjustment of either class of agents may be necessary.

Tolerance to this drug and cross tolerance to other nitrates and nitrites may occur. Tolerance to the vascular and antianginal effects of isosorbide dinitrate or nitroglycerin has been demonstrated in clinical trials, experience through occupational exposure, and in isolated tissue experiments in the laboratory. The importance of tolerance to the appropriate use of isosorbide dinitrate in the management of patients with angina pectoris has not been determined. However, one clinical trial using treadmill exercise tolerance (as an end point) found an 8 hour duration of action of oral isosorbide dinitrate following the first dose (after a 2 week placebo washout) and only a 2 hour duration of effect of the same dose after 1 week of repetitive dosing at conventional dosing intervals. On the other hand, several trials have been able to differentiate isosorbide dinitrate from placebo after 4 weeks of therapy and, in open trials, an effect seems detectable for as long as several months.

Tolerance clearly occurs in industrial workers continuously exposed to nitroglycerin. Moreover, physical dependence also occurs since chest pain, acute myocardial infarction, and even sudden death have occurred during temporary withdrawal of nitroglycerin from the workers. In clinical trials in angina patients, there are reports of anginal attacks being more easily provoked and of rebound in the hemodynamic effects soon after nitrate withdrawal. The relative importance of these observations to the routine, clinical use of isosorbide dinitrate is not known. However, it seems prudent to gradually withdraw patients from isosorbide dinitrate when the therapy is being terminated, rather than stopping the drug abruptly.

Information for Patients: Headache may occur during initial therapy with SORBITRATE. Headache is usually relieved by the use of standard headache remedies or by lowering the dose and tends to disappear after the first week or two of use.

Drug Interactions: Alcohol may enhance any marked sensitivity to the hypotensive effect of nitrates.

Isosorbide dinitrate acts directly on vascular smooth muscle, therefore, any other agent that depends on vascular smooth muscle as the final common path can be expected to have decreased or increased effect depending on the agent.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No long-term studies in animals have been performed to evaluate the carcinogenic potential of this drug. A modified two-litter reproduction study in rats fed isosorbide dinitrate at 25 or 100 mg/kg/day did not reveal any effects on fertility or gestation or any remarkable gross pathology in any parent or offspring fed isosorbide dinitrate as compared with rats fed a basal controlled diet.

Pregnancy Category C: Isosorbide dinitrate has been shown to cause a dose-related increase in embryotoxicity (increase in mummified pups) in rabbits at oral doses 35 and 150 times the maximum recommended human daily dose. There are no adequate and well-controlled studies in pregnant women. SORBITRATE should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when SORBITRATE is administered to a nursing woman.

Pediatric Use: The safety and effectiveness of SORBITRATE in children has not been established.

ADVERSE REACTIONS: Adverse reactions, particularly headache and hypotension, are dose related. In clinical trials at various doses, the following have been observed:

Headache is the most common (reported incidence varies widely, apparently being dose related, with an average occurrence of about 25%) adverse reaction and may be severe and persistent. Cutaneous vasodilation with flushing may occur. Transient episodes of dizziness and weakness, as well as other signs of cerebral ischemia associated with postural hypotension, may occasionally develop (the incidence of reported symptomatic hypotension ranges from 2% to 36%). An occasional individual will exhibit marked sensitivity to the hypotensive effects of nitrates and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration, and collapse) may occur even with the usual therapeutic dose. Drug rash and/or exfoliative dermatitis may occasionally occur. Nausea and vomiting appear to be uncommon. Case reports of clinically significant methemoglobinemia are rare at conventional doses of organic nitrates. The formation of methemoglobin is dose related and, in the case of genetic abnormalities of hemoglobin that favor methemoglobin formation, even conventional doses of organic nitrate could produce harmful concentrations of methemoglobin.

DOSAGE AND ADMINISTRATION: For the treatment of angina pectoris, the usual starting dose for sublingual SORBITRATE is 2.5 to 5 mg, for chewable tablets, 5 mg, for oral (swallowed) tablets, 5 to 20 mg, and for controlled release forms, 40 mg.

SORBITRATE should be titrated upward until angina is relieved or side effects limit the dose. In ambulatory patients, the magnitude of the incremental dose increase should be guided by measurements of standing blood pressure.

The initial dosage of sublingual or chewable SORBITRATE for prophylactic therapy in angina pectoris patients is generally 5 or 10 mg every 2 to 3 hours. Adequate controlled clinical studies demonstrating the effectiveness of chronic maintenance therapy with these dosage forms have not been reported.

SORBITRATE in oral doses of 10 to 40 mg given every 6 hours or in oral controlled-release doses of 40 to 80 mg given every 8 to 12 hours is generally recommended. The extent to which development of tolerance should modify the dosage program has not been defined. *The oral controlled-release forms of isosorbide dinitrate should not be chewed.*

DOSAGE FORMS AVAILABLE: Sublingual Tablets (2.5, 5, 10 mg), Chewable Tablets (5, 10 mg), Oral Tablets (5, 10, 20, 30, 40 mg), Sustained Action Tablets (40 mg).



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WHAT'S NEW?

Boehringer Ingelheim Pharmaceuticals and ALZA Corporation announce the availability of CATAPRESS-TTS®, the first transdermal patch for high blood pressure. The patch is applied once each week, thereby improving compliance. Patients wear it during normal activities, including bathing and swimming. The patch consists of four layers, an impermeable backing, a drug reservoir, a special membrane and an adhesive. The body absorbs the drug at a controlled rate, as though the patient were receiving a closely monitored intravenous infusion.

STATEMINTS is the name of the company that makes STATEMINTS, special hard candy mints designed for use as substitutes for smoking in "no-smoking-situations." Three flavors—cinnamon, peppermint and spearmint. They come with an unbreakable attractive candy jar. They are individually wrapped and contain no caffeine or other stimulant. Recommended for doctors' offices where they provide something to do instead of smoking—and, incidentally, freshen the breath.

Scott Paper Company Health Care Products announces PROMISE®, an effective new system for adult incontinence. "PROMISE is not a diaper. It is a new system of form-fitting pants and protective pads that is designed to take the treatment of adult incontinence out of the diaper age." Scott is sponsoring the development of a bladder training program called System to Regulate Urinary Toiletry (STRUT), which is being tested in nursing homes.

Boehringer Mannheim Diagnostics has a new system to monitor blood sugar levels conveniently, accurately and easily. Accu-Chek II® /Chemstrip bG® enables the diabetic patient to monitor blood sugar levels and to adjust insulin dosage, food intake, and exercise patterns. One drop of blood is sufficient. Autoclix™ is an automatic lancet device which is virtually painless.

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CANCER CORNER

WILLIAM M. DUGAN, JR., M.D.
Clinical Oncology Center, Methodist Hospital of Indiana

Major Advances in Oncology: The R. Livingston Ireland Cancer Center, University Hospitals of Cleveland is presenting a symposium for oncology specialists and other MDs interested in the latest advances in cancer management on Saturday, Jan. 18, 1986.

Current Theory of Gastrointestinal Malignancies will be the topic, with Management of Gastric Cancer and Current Status of Hepatic Artery Chemotherapy for Primary and Secondary Liver Cancer as the focus areas. For further information contact: Barbara Guy, Administrative Assistant to the Director, 2074 Abington Rd., Cleveland, Ohio 44106. Phone 216-844-7856.

THE LITTLE RED DOOR: Finding the cause and cure of cancer, providing educational materials and programs, giving service to cancer patients and conducting screening programs for the detection of cancer have been the main objectives of the Little Red Door since its inception in 1945. A community agency, it is supported by the United Way and by individual contributions.

It is operated and maintained, in large measure, through the dedicated efforts of more than 1,500 active volunteers who serve as office aides, motor corps drivers, program speakers, board and committee members and members of sewing groups who make the dressings for cancer patients.

Sickroom Equipment & Supplies: Equipment essential to the patient's comfort and to facilitate his care in the home is loaned upon approval of the attending physician. Hospital beds, bedside tables, commodes, aspirators, wheel chairs, walkers and other convenience items are available. Non-medical and comfort supplies such as cotton, tape and rubbing alcohol also may be provided. Colostomy and ileostomy supplies and some prosthetic aids can be given when approved by the physician.

Surgical Dressings: Standard sizes of soft and paperback dressings are stocked for immediate use. Special sizes and types may be supplied on the physician's request. Though not sterilized, these are made from clean, white, used muslin and carefully inspected and wrapped. Sterile gauze dressings are available.

Motor Corps: Dressings and supplies can be delivered to the home if pick-up by the family cannot be arranged. Requests must be phoned to the Little Red Door.

Nursing Service & Home Health Aides: Home nursing service and home health aides are available for cancer patients unable to pay for it, in accordance with the physician's orders.

Transportation: Transportation for treatment is provided for patients on request of their physician, who recommends the kind of public transportation needed.

Social Services: The Social Service Consultant has special understanding of the many problems/stresses faced by the cancer patient and family, and is available to give supportive counseling and guidance to families needing help. The attending physician is consulted regarding all requests for services. The services of the Little Red Door are free to those in need. Call (317) 925-5595 for further information.

Support Groups: The Little Red Door works with the Anamilo Club (for laryngectomees), the Ostomy Association (for ostomates) and the Make Today Count Group (for people with life-threatening illness). If you are interested in participating in any of these groups, call the Little Red Door.

Speakers Bureau: Many Marion County leading physicians are available to speak and answer questions for organizations. Films are also available for such programs if desired.

Screening & Detection: This facet is concerned with the early detection of malignancy when appropriate care and treatment are the most effective. For further information, call the Little Red Door, (317) 925-5595.

Literature, films, and exhibits about cancer are available on request.

Did You Know . . . that 44 cancer patients, ages 8 to 18, attended Camp Little Red Door for one week in August 1984? . . . that the Little Red Door served an average of 263 cancer patients each month in 1984? . . . that 27,750 hours of volunteer service were given to the Little Red Door program in 1984, making a grand total of 1,923,744 volunteer hours since 1945 . . . that more than 1,400 volunteers worked last year in the Little Red Door program? . . . that more than 127,198 dressings were furnished for cancer patients last year? . . . that 1,470 items of sick room equipment were loaned to patients in 1984? . . . that 66,254 pieces of educational literature were distributed in 1984, making an average of more than 181 pieces for each day of the year? . . . that films, speakers, exhibits and informational written materials are available on request, without charge? . . . that each issue of the Little Red Door Quarterly Newsletter now reaches more than 1,400 Marion County citizens? (If you aren't on the mailing list, call the office (317) 925-5595) . . . that in 1984, an average of 391 trips to treatment centers were furnished for needy patients last year? . . . that 638 people were official members of this agency in 1984? If you would like to become a member call (317) 925-5595 . . . that the volunteer motor corps drove 2,228 miles last year delivering supplies and dressings to patients?

BALANCED CALCIUM CHANNEL BLOCKADE!



Low incidence of side effects
CARDIZEM® (diltiazem HCl) produces an incidence of adverse reactions not greater than that reported with placebo therapy, thus contributing to the patient's sense of well-being.

*Cardizem is indicated in the treatment of angina pectoris due to coronary artery spasm and in the management of chronic stable angina (classic effort-associated angina) in patients who cannot tolerate therapy with beta-blockers and/or nitrates or who remain symptomatic despite adequate doses of these agents.

References:
1. Strauss WE, McIntyre KM, Parisi AF, et al: Safety and efficacy of diltiazem hydrochloride for the treatment of stable angina pectoris: Report of a cooperative clinical trial. Am J Cardiol 49:560-566, 1982.
2. Pool PE, Seagren SC, Bonanno JA, et al: The treatment of exercise-inducible chronic stable angina with diltiazem: Effect on treadmill exercise. Chest 78 (July suppl):234-238, 1980.

Reduces angina attack frequency*
42% to 46% decrease reported in multicenter study.[1]

Increases exercise tolerance*
In Bruce exercise test,[2] control patients averaged 8.0 minutes to onset of pain; Cardizem patients averaged 9.8 minutes ($P<.005$).

CARDIZEM®
(diltiazem HCl)

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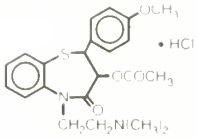
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PROFESSIONAL USE INFORMATION

cardizem®
(diltiazem HCl)
30 mg and 60 mg tablets

DESCRIPTION

CARDIZEM® (diltiazem hydrochloride) is a calcium ion influx inhibitor (slow channel blocker or calcium antagonist). Chemically, diltiazem hydrochloride is 1,5-Benzothiazepin-4(5H)one,3-(acetyloxy) -5-[2-(dimethylamino)ethyl]-2,3-dihydro-2-(4-methoxyphenyl)-, monohydrochloride,(+) -cis- The chemical structure is



Diltiazem hydrochloride is a white to off-white crystalline powder with a bitter taste It is soluble in water, methanol, and chloroform It has a molecular weight of 450 98. Each tablet of CARDIZEM contains either 30 mg or 60 mg diltiazem hydrochloride for oral administration

CLINICAL PHARMACOLOGY

The therapeutic benefits achieved with CARDIZEM are believed to be related to its ability to inhibit the influx of calcium ions during membrane depolarization of cardiac and vascular smooth muscle

Mechanisms of Action. Although precise mechanisms of its antianginal actions are still being delineated, CARDIZEM is believed to act in the following ways

1. Angina Due to Coronary Artery Spasm. CARDIZEM has been shown to be a potent dilator of coronary arteries both epicardial and subendocardial Spontaneous and ergonovine-induced coronary artery spasm are inhibited by CARDIZEM
2. Exertional Angina. CARDIZEM has been shown to produce increases in exercise tolerance, probably due to its ability to reduce myocardial oxygen demand This is accomplished via reductions in heart rate and systemic blood pressure at submaximal and maximal exercise work loads

In animal models, diltiazem interferes with the slow inward (depolarizing) current in excitable tissue It causes excitation-contraction uncoupling in various myocardial tissues without changes in the configuration of the action potential Diltiazem produces relaxation of coronary vascular smooth muscle and dilation of both large and small coronary arteries at drug levels which cause little or no negative inotropic effect The resultant increases in coronary blood flow (epicardial and subendocardial) occur in ischemic and nonischemic models and are accompanied by dose-dependent decreases in systemic blood pressure and decreases in peripheral resistance

Hemodynamic and Electrophysiologic Effects. Like other calcium antagonists, diltiazem decreases sinoatrial and atrioventricular conduction in isolated tissues and has a negative inotropic effect in isolated preparations In the intact animal, prolongation of the AH interval can be seen at higher doses.

In man, diltiazem prevents spontaneous and ergonovine-provoked coronary artery spasm It causes a decrease in peripheral vascular resistance and a modest fall in blood pressure and, in exercise tolerance studies in patients with ischemic heart disease, reduces the heart rate-blood pressure product for any given work load Studies to date, primarily in patients with good ventricular function, have not revealed evidence of a negative inotropic effect, cardiac output, ejection fraction, and left ventricular end diastolic pressure have not been affected There are as yet few data on the interaction of diltiazem and beta-blockers Resting heart rate is usually unchanged or slightly reduced by diltiazem

Intravenous diltiazem in doses of 20 mg prolongs AH conduction time and AV node functional and effective refractory periods approximately 20% In a study involving single oral doses of 300 mg of CARDIZEM in six normal volunteers, the average maximum PR prolongation was 14% with no instances of greater than first-degree AV block Diltiazem-associated prolongation of the AH interval is not more pronounced in patients with first-degree heart block In patients with sick sinus syndrome, diltiazem significantly prolongs sinus cycle length (up to 50% in some cases)

Chronic oral administration of CARDIZEM in doses of up to 240 mg/day has resulted in small increases in PR interval, but has not usually produced abnormal prolongation There were, however, three instances of second-degree AV block and one instance of third-degree AV block in a group of 959 chronically treated patients

Pharmacokinetics and Metabolism. Diltiazem is absorbed from the tablet formulation to about 80% of a reference capsule and is subject to an extensive first-pass effect, giving an absolute bioavailability (compared to intravenous dosing) of about 40% CARDIZEM undergoes extensive hepatic metabolism in which 2% to 4% of the unchanged drug appears in the urine In vitro binding studies show CARDIZEM is 70% to 80% bound to plasma proteins Competitive ligand binding studies have also shown CARDIZEM binding is not altered by therapeutic concentrations of digoxin, hydrochlorothiazide, phenylbutazone, propranolol, salicylic acid, or warfarin Single oral doses of 30 to 120 mg of CARDIZEM result in detectable plasma levels within 30 to 60 minutes and peak plasma levels two to three hours after drug administration The plasma elimination half-life following single or multiple drug administration is approximately 3 5 hours Desacetyl diltiazem is also present in the plasma at levels of 10% to 20% of the parent drug and is 25% to 50% as potent a coronary vasodilator as diltiazem Therapeutic blood levels of CARDIZEM appear to be in the range of 50 to 200 ng/ml There is a departure from dose-linearity when single doses above 60 mg are given, a 120-mg dose gave blood levels three times that of the 60-mg dose There is no information about the effect of renal or hepatic impairment on excretion or metabolism of diltiazem

INDICATIONS AND USAGE

1. **Angina Pectoris Due to Coronary Artery Spasm.** CARDIZEM is indicated in the treatment of angina pectoris due to coronary artery spasm. CARDIZEM has been shown effective in the treatment of spontaneous coronary artery spasm presenting as Prinzmetal's variant angina (resting angina with ST-segment elevation occurring during attacks).
2. **Chronic Stable Angina (Classic Effort-Associated Angina).** CARDIZEM is indicated in the management of chronic stable angina CARDIZEM has been effective in controlled trials in reducing angina frequency and increasing exercise tolerance.

There are no controlled studies of the effectiveness of the concomitant use of diltiazem and beta-blockers or of the safety of this combination in patients with impaired ventricular function or conduction abnormalities.

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. **Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1243 patients for 0 48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem
2. **Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt) Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited Caution should be exercised when using the drug in such patients.
3. **Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension
4. **Acute Hepatic Injury.** In rare instances, patients receiving CARDIZEM have exhibited reversible acute hepatic injury as evidenced by moderate to extreme elevations of liver enzymes (See PRECAUTIONS and ADVERSE REACTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals The drug should be used with caution in patients with impaired renal or hepatic function In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued In dogs, doses of 20 mg/kg were also associated with hepatic changes, however, these changes were reversible with continued dosing

Drug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM (See WARNINGS).

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity There was also no mutagenic response in in vitro bacterial tests No intrinsic effect on fertility was observed in rats

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality These doses, in some studies, have been reported to cause skeletal abnormalities In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus

Nursing Mothers. It is not known whether this drug is excreted in human milk Because many drugs are excreted in human milk, exercise caution when CARDIZEM is administered to a nursing woman if the drug's benefits are thought to outweigh its potential risks in this situation

Pediatric Use. Safety and effectiveness in children have not been established

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition In many cases, the relationship to CARDIZEM has not been established The most common occurrences, as well as their frequency of presentation, are edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%), AV block (1.1%). In addition, the following events were reported infrequently (less than 1%) with the order of presentation corresponding to the relative frequency of occurrence

Cardiovascular:	Flushing, arrhythmia, hypotension, bradycardia, palpitations, congestive heart failure, syncope.
Nervous System:	Paresthesia, nervousness, somnolence, tremor, insomnia, hallucinations, and amnesia
Gastrointestinal	Constipation, dyspepsia, diarrhea, vomiting, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH
Dermatologic	Pruritus, petechiae, urticaria, photosensitivity.
Other:	Polyuria, nocturia

The following additional experiences have been noted

A patient with Prinzmetal's angina experiencing episodes of vasospastic angina developed periods of transient asymptomatic asystole approximately five hours after receiving a single 60-mg dose of CARDIZEM

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: erythema multiforme; leukopenia, and extreme elevations of alkaline phosphatase, SGOT, SGPT, LDH, and CPK However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established

OVEROOSAGE OR EXAGGERATEO RESPONSE

Overdosage experience with oral diltiazem has been limited Single oral doses of 300 mg of CARDIZEM have been well tolerated by healthy volunteers. In the event of overdosage or exaggerated response, appropriate supportive measures should be employed in addition to gastric lavage. The following measures may be considered:

Bradycardia	Administer atropine (0.60 to 1.0 mg). If there is no response to vagal blockade, administer isoproterenol cautiously
High-Degree AV Block	Treat as for bradycardia above. Fixed high degree AV block should be treated with cardiac pacing.
Cardiac Failure	Administer inotropic agents (isoproterenol, dopamine, or dobutamine) and diuretics.
Hypotension	Vasopressors (eg, dopamine or levarterenol bitartrate).

Actual treatment and dosage should depend on the severity of the clinical situation and the judgment and experience of the treating physician

The oral/LO_{50}'s in mice and rats range from 415 to 740 mg/kg and from 560 to 810 mg/kg, respectively The intravenous LO_{50}'s in these species were 60 and 38 mg/kg, respectively The oral LD_{50} in dogs is considered to be in excess of 50 mg/kg, while lethality was seen in monkeys at 360 mg/kg The toxic dose in man is not known but blood levels in excess of 800 ng/ml have not been associated with toxicity

DOSAGE AND AOMINISTRATION

Exertional Angina Pectoris Due to Atherosclerotic Coronary Artery Disease or Angina Pectoris at Rest Due to Coronary Artery Spasm. Oosage must be adjusted to each patient's needs Starting with 30 mg four times daily, before meals and at bedtime, dosage should be increased gradually (given in divided doses three or four times daily) at one- to two-day intervals until optimum response is obtained. Although individual patients may respond to any dosage level, the average optimum dosage range appears to be 180 to 240 mg/day There are no available data concerning dosage requirements in patients with impaired renal or hepatic function If the drug must be used in such patients, titration should be carried out with particular caution

Concomitant Use With Other Antianginal Agents:

1. **Sublingual NTG** may be taken as required to abort acute anginal attacks during CARDIZEM therapy.
2. **Prophylactic Nitrate Therapy**—CARDIZEM may be safely coadministered with short- and long-acting nitrates, but there have been no controlled studies to evaluate the antianginal effectiveness of this combination
3. **Beta-blockers.** (See WARNINGS and PRECAUTIONS.)

HOW SUPPLIEO

Cardizem 30-mg tablets are supplied in bottles of 100 (NDC 0088-1771-47) and in Unit Oose Identification Paks of 100 (NDC 0088-1771-49). Each green tablet is engraved with MARION on one side and 1771 engraved on the other CARDIZEM 60-mg scored tablets are supplied in bottles of 100 (NDC 0088-1772-47) and in Unit Dose Identification Paks of 100 (NOC 0088-1772-49). Each yellow tabfet is engraved with MARION on one side and 1772 on the other

Issued 4/1/1

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PUBLIC HEALTH NOTES

On August 14, 1935, the Social Security Act was signed into law, providing for a federal-state partnership to meet the health and social service needs of children throughout the nation.

It is time to celebrate the 50th anniversary of the passage of Title V of the Social Security Act. Maternal and Child Health and Crippled Children's Programs are leading the national celebration to review accomplishments of Title V Programs, to examine current unmet needs, and to set goals for the next 50 years. The nation's activities are being coordinated by the National Maternal and Child Health Resource Center, culminating with a birthday celebration at the American Public Health Association's convention in Washington, D.C.

With the 50th anniversary celebration having a state as well as a national focus, the profile of Maternal and Child Health and Crippled Children's Programs will be enhanced, while calling attention to the past, present, and future of maternal and child health in this country. Both the Indiana State Board of Health and Department of Public Welfare's Crippled Children's Program are planning celebrations.

The Indiana State Board of Health Division of Maternal and Child Health plans, promotes, coordinates and supports those activities designated to achieve and maintain health for all mothers and children within the state of Indiana.

Funds are received from the United States Public Health Service and are channeled through the Indiana State Board of Health's Division of Maternal and Child Health to support comprehensive health care for women and children. The source of these funds includes the Maternal and Child Health Block Grant, the Preventive Health Services Block Grant and discretionary grants for Special Projects of Regional and National Significance (SPRANS).

The Indiana State Board of Health makes these funds available to public and incorporated not-for-profit agencies to provide activities that enhance the health of Indiana's women and children. Primary care clinics are supported in areas of the state that demonstrate a need. These clinics provide one or more of the following services: prenatal care, child health care, family planning, adolescent health, dental health and high risk newborn follow-up. Services are made available on a sliding fee scale based on an individual's income and family size. Individuals whose income is less than 150 percent of poverty are not charged for services.

Other areas of responsibility include: coordination of newborn intensive care services; provision of medication for the prevention of rheumatic fever; sponsorship of an annual study on maternal deaths in cooperation with the Indiana State Medical Association; and development of innovative programs which assist in the improvement of health services for women and children or increase the skill and knowledge of health professionals providing services to Indiana's women and children. The genetic diseases program, the sudden infant death program, the lead screening program, the rape and sexual assault prevention program, and the child passenger safety program are also administered by the MCH Division.

Some projects have been educational in nature and include training and provision of literature to health professionals in counseling prenatal clients to quit smoking, the development of family life education materials for adolescents, training of persons in 20 targeted counties to organize adolescent pregnancy prevention coalitions, an injury prevention program, development of family life education programs, and development of childbirth education curriculum for adolescents. Child abuse prevention is also a high priority within the maternal and child health program.

Research and development are conducted on various issues by the Indiana State Board of Health, including those which will lead to better services for women and children and program planning and development that will assist efforts to improve the health status of Indiana's citizens.

The Indiana State Board of Health will sponsor a "birthday party" celebration in conjunction with the Sixth Annual Maternal and Child Health Conference this month in Indianapolis. As plans progress, information will be shared with maternal and child health providers. The Department of Public Welfare's Crippled Children's Program will co-sponsor Indiana's birthday celebration along with the Department of Pediatrics, Indiana University Medical Center.

Crippled Children's Programs are planning community events throughout Indiana to celebrate the 50th year of maternal and child health.

For more information on Maternal and Child Health programs or the planned state celebration of the 50th year of MCH, contact the State Board of Health, 317/633-8447.



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To obtain Category 1 credit for this month's article, complete the quiz on page 1055.



Brain Stem Tumors

An Analysis of Diagnostic Studies

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BRAIN STEM TUMORS account for approximately 10-20% of all central nervous system tumors in children and occur less in adults.[1] In children, 50% of these tumors occur before age 5 and 80% occur prior to age 21.[2,3] The true incidence is elusive in that histological confirmation is often unavailable. Brain stem tumors are usually astrocytomas or glioblastomas which infiltrate between the tracts and nuclei of the brain stem. Therefore, cranial nerve dysfunction and long tract signs are common manifestations.

These tumors are frequently treated as a homogenous group, without knowledge of their histology. They are often thought of as malignant regardless of their histological type, since they are not surgically resectable and are poorly responsive to radiation therapy and chemotherapy.[5]

Historically, clinical examination, cerebral angiogram and pneumoencephalography were used to make a diagnosis. In the past decade, computed tomography (CT) scan and brain stem auditory evoked responses (BAER) have contributed to the diagnostic regimen and, more recently, magnetic resonance imaging (MRI) has been added to the diagnostic workup. This paper attempts to analyze the various diagnostic modalities and their efficacies in evaluating brain stem tumors.

Subjects and Methods

The charts of 25 patients with initial diagnosis of brain stem glioma were reviewed. Three of these patients were eliminated from the study. Two patients not included had biopsies reveal-

TABLE 1

Patient Number	Age	Race	Sex	Location
1	15	W	M	Medulla/cerebellum
2	66	W	F	Pons/mesencephalon
3	5	W	F	Medulla/pons
4	12	W	M	Mesencephalon/thalamus
5	49	W	F	Pons
6	67	W	M	Pons/medulla
7	7	W	M	Pons/medulla/cerebellum
8	16	W	M	Mesencephalon
9	6	W	M	Medulla
10	19	B	F	Pons/medulla
11	5	W	F	Pons/medulla
12	9	B	F	Mesencephalon/thalamus
13	15	W	F	Pons/medulla
14	15	W	F	Pons/medulla
15	17	W	F	Pons/medulla
16	2	W	F	C-cord/medulla/pons
17	11	W	F	Pons
18	8	W	M	Mesencephalon/thalamus
19	2	W	M	Medulla/pons
20	40	W	M	Medulla/pons
21	5	W	F	Pons/medulla
Mean Age-18.4 years		20W/2B 91%/9%	13F/9M 59%/41%	Pons - 12 (54.5%) Medulla - 6 (27.3%) Mesencephalon - 4 (18.2%)
Under age 20 - 82%				
Mean Age under 20 - 10.2 years				

TABLE 2

Symptoms	Primary	Secondary
Headache	9 (41%)	5(23%)
Balance difficulty	9 (41%)	5(23%)
Weakness	6 (27%)	6(27%)
Double vision	6 (27%)	5(23%)
Nausea and/or vomiting	5 (23%)	6(27%)
Dizziness	2 (9.1%)	3(14%)
Personality change	2 (9.1%)	1(4.6%)
Paresthesias	2 (9.1%)	0
Slurred speech	2 (9.1%)	6(27%)
Numbness	1 (4.6%)	2(9.1%)
Tremor	1 (4.6%)	0
Drooling	1 (4.6%)	6(27%)
Trouble swallowing	1 (4.6%)	6(27%)
Hoarseness	1 (4.6%)	1(4.6%)
Sleep pattern change	1 (4.6%)	3(14%)
Hiccups	0	2(9.1%)
Yawning	0	1(4.6%)

TABLE 3

Neurological Signs in 22 Patients

Signs	Patients (%)
Cranial nerve abnormalities	18 (82)
Long tract	16 (73)
Cerebellar	16 (73)
MLF	2 (9)
Papilledema	2 (9)

ing a vascular malformation and a pineal seminomatous germinoma, respectively. The other excluded patient showed a thalamic tumor not involving the mesencephalon. All the patients, except one, had abnormal CT head examinations followed by MRI studies for comparison. Only one patient with a normal CT scan had abnormal MRI.

The MRI studies were performed on a Technicare Corporation .15 tesla resistive system. Half of the patients were imaged with pulse-sequences of: 1) a spin density and T_1-weighted spin echo sequence (TE = 30 msec, TR = 250 or 500 msec); 2) a T_2-weighted spin echo sequence (TE = 60 or 120 msec. TR = 1000 msec), and; 3) an inversion recovery sequence (T_1 = 400 or 450 msec, TR = 1250-1500 msec). The last half of the series was performed with a TE = 30 msec, TR = 500 msec and TE = 120 msec and TR = 2000 msec.

Some of the CT scans were done on a Phillips Tomoscan 310 scanner and EMI 5005. Other CT examinations were performed on scanners outside of the Medical Center. Symptoms and signs, cerebrospinal fluid (CSF) examinations, biopsy results, electroencephalogram (EEG), evoked response studies, angiography, myelography, and skull radiography were studied. Comparisons of age, sex, race, location of tumor, signs, symptoms and corresponding EEG, evoked responses, and radiological tests were made.

Results

The mean age in patients suspected of having a brain stem glioma was 18.4 years. Eighteen patients (82%) were under the age of 20, averaging 10.2 years of age. Four patients (18%) were older than age 20, averaging 55.5 years of age. Twenty patients (91%) were white, while only two (9%) were black. There were 13 females (59%) and nine males (41%).

Of the presumed brain stem gliomas, 12 (54%) were located primarily in the pons, six (27.3%) in the medulla, and four (18.2%) were in the mesencephalon. Hydrocephalus was a frequent finding, occurring in 54.5% (12 patients). These patients had a mean age of 13.8 years. Of the patients with hydrocephalus, over one-half (58.3%) had pontine tumors, while medullary and mesencephalic tumors represented 16.7% and 25%, respec-

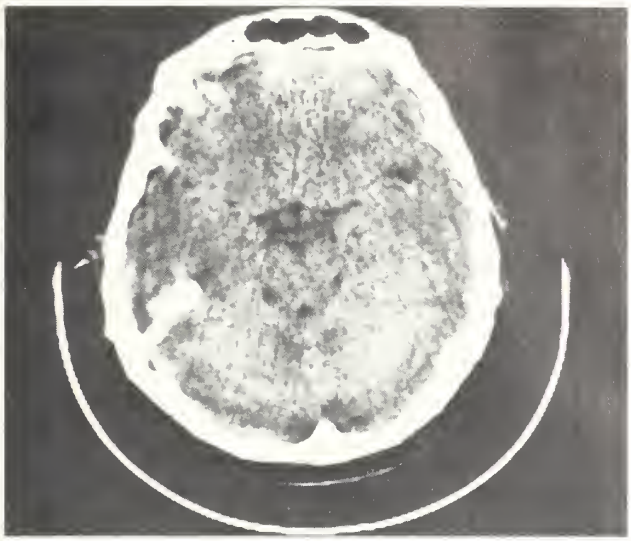


FIGURE 1: Patient No. 20. Normal CT scan of the head with posterior fossa.

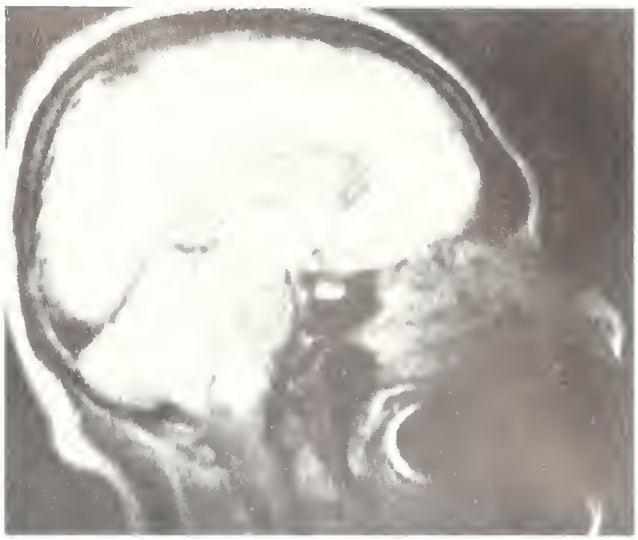


FIGURE 2: Patient No. 20. Right parasagittal MRI, showing a dense lesion at the medullary level.

tively (*Table 1*). The presenting symptoms and signs according to their frequency are summarized in *Tables 2 and 3*.

By tumor location, headache was the most common symptom, with pontine and mesencephalic lesions occurring in 50% of the patients, while balance difficulties predominated in patients with medullary tumors (50%). The incidence of double vision was highest (50%) in patients with mesencephalic tumors. Forty-one percent of patients who complained of headache had hydrocephalus. Only three patients (14%) had headaches without hydrocephalus, but three patients with hydrocephalus were headache free. Nearly one-third of the patients had no headaches and no hydrocephalus. Eighty-two percent of the patients had cranial nerve abnormalities, while long tract and cerebellar signs were found in 73% of those studied.

EEGs: Eleven EEGs were performed in nine patients. Seven of the studies (64%) were abnormal while four (36%) were normal. The abnormalities included mild diffuse slowing (four patients), bilateral parietal spikes (one patient), left temporal slow focus (one patient), irregular theta and sharp waves (one patient), and sleep apnea of 30 seconds duration (one patient).

Evoked Responses: Twelve patients underwent 15 BAERs. Eight (53%) of the studies were abnormal while seven were normal. The most common abnormalities were prolonged or absent waves III, IV, and V, as well as prolonged I-V and III-V interpeak latencies. One patient with a brain stem tumor seemingly confined to the medulla, as seen on MRI, had two brain stem auditory evoked responses which were completely normal. Three patients with pontine tumors and two patients with tumors of the mid brain had normal brain stem auditory evoked responses which were repeated within four months, resulting in abnormal studies. Seven (46.7%) of the brain stem auditory evoked responses were abnormal in patients with pontine tumors. One abnormal brain stem auditory evoked response (6.7%) occurred in a patient with a mesencephalic tumor.

In the patients receiving BAERs, those with balance difficulties and weakness were most likely to have abnormal studies. Initial symptoms of headache, double vision, and nausea and/or vomiting did not consistently lead to abnormal BAERs. Physical findings more favorably predicted abnormal brain stem evoked responses. Eight patients (62%) with cranial nerve dysfunction, six patients (67%) with pyramidal tract findings, and five (63%) with cerebellar signs had abnormal brain stem evoked responses. Four patients had somatosensory evoked response testing (SER). Three studies were normal and one study was abnormal in showing absent N19 waves bilaterally, suggesting a lesion rostral to the foramen magnum.

CT Scan: All patients had CT head examinations. Twenty-one of 22 patients (96%) had abnormal scans on presentation or during their work-up. One patient with a grade 2 astrocytoma had two normal CT head scans (*Fig. 1*) with posterior fossa cuts and a concomitant abnormal MRI showing the tumor in the medulla (*Fig. 2*). Five scans showed cystic or necrotic features of tumor. Thirteen (59%) of the patients showed enhancement with contrast, while nine (41%) did not enhance with contrast. Displacement of the fourth ventricle, mostly posterior, occurred in 17 patients (77%), while five (23%) did not appear displaced. The attenuation of the lesions was equal to or less than that of surrounding brain in all cases. One patient had a midline cystic neoplasm

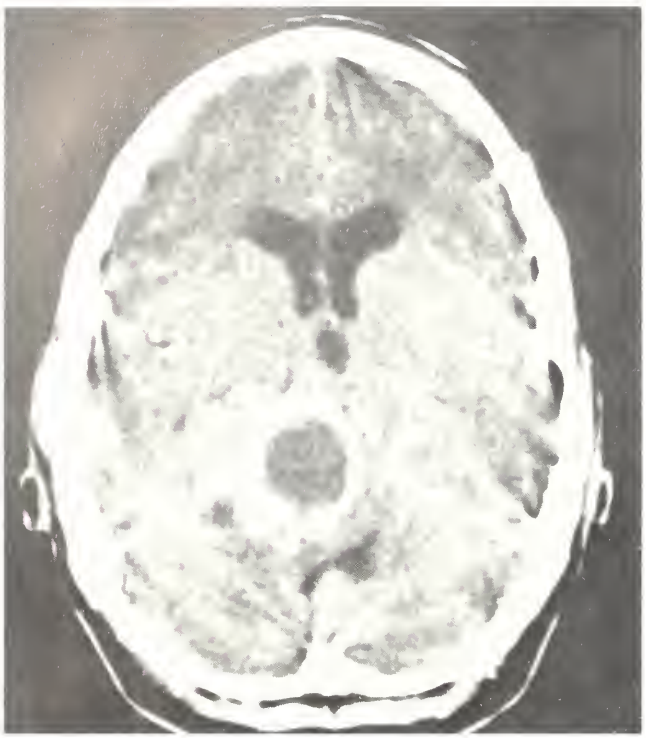


FIGURE 3: Patient No. 21. Enhanced CT scan of the brain, demonstrating a large cystic lesion in the pontomesencephalic region with minimal enlargement of the lateral ventricles.



FIGURE 4: Patient No. 21. Right parasagittal MRI, showing a large, dense lesion with exophytic component at the pontomesencephalic region.

in the region of the fourth ventricle, but, on CT, its origin from the brain stem was not clear.

MRI: All 21 of 21 patients had lesions documented as brain stem tumors on MRI. The MRI showed brain stem enlargement and displacement of the fourth ventricle as well as or better than CT. The patient with the CT showing a cystic midline neoplasm in the region of the fourth ventricle (*Fig. 3*), with questionable brain stem origin, had an MRI which showed the tumor originating from the pontomedullary junction with exophytic extension into the fourth ventricle (*Fig. 4*). One patient initially thought to have a brain stem stroke was found to have a brain stem tumor on MRI. T_2-weighted images seemed to provide better contrast resolution, while T_1-weighted images showed superior spatial resolution. A prolonged T_1 and T_2 was seen in all of the tumors. One patient with a normal CT head examination had an MRI revealing a large medullary brain stem tumor. In several cases, the MRI was superior in showing medullary involvement of tumor on sagittal cuts compared to the CT sections, which showed unclear images which were degraded by petrous bone artifacts.

Discussion

Physicians who care for patients with signs and symptoms indicative of brain stem gliomas order a multitude of tests to support their suspicions. It is clear that certain studies are more valuable than others. The population analyzed in this study does not differ tremendously from other investigators' experiences.

Five recent studies list patients with brain stem gliomas broken down by sex. These studies range from 60% female predominance to 64% male predominance, which compares to 59% female predominance in this study.[1,4,5,6,7] Other studies indicate mean age ranging from 5.5 years to 22 years, with this study's mean being 10.2 years. Mantravadi, *et al.*, found 17 of 25 patients (68%) with pontine lesions compared to 55% in this study, while six (24%) were in the medulla and two (9%) were in the mid brain.[7] A large percentage (53%-59%) spread from the pons to the medulla and mesencephalon to other surrounding structures. Hydrocephalus was a prominent feature with our patients and, in fact, has been seen in one-third to one-half of patients in other studies.[5,8,9]

Ataxia and headache were common presenting symptoms as also noted by other authors, and cranial nerve dysfunction, ataxia and pyramidal tract

abnormalities were universally common presenting physical findings.[1,4,6,7]

The literature has pointed out the usefulness of brain stem auditory evoked response in evaluating brain stem glioma. Stockard's series (ANN, 1979) showed over 90% of patients with brain stem glioma had an abnormal BAER, and more than half of these had normal CT scans.[11] Chiappa cites four studies comprising 21 patients with brain stem glioma, all of whom had abnormal BAERs.[12] Original work done at Mayo Clinic showed four of four patients with brain stem gliomas who had abnormal BAERs, one of whom had a normal CT scan.[13] A San Francisco investigator reported two cases of brain stem gliomas with normal BAERs.[14] BAERs are a helpful, but not infallible, diagnostic tool.

CT scan and MRI both prove to be the most valuable diagnostic tools to diagnose brain stem glioma. Displacement of the fourth ventricle is a common CT finding and has been called pathognomonic in the past. Attenuation of brain stem gliomas on CT proves to be equal to or less than that of normal surrounding brain stem. Enhancement characteristics are variable in many reported studies and in this study did not show any consistent trend. Edwards found no correlation between tumor appearance on CT scan or tumor location and the subsequent tumor diagnosis.[4] Some authors believe that CT depicts the tumor margins well when compared to autopsy findings.[6] While regions of enhancement can serve as a guideline for biopsy, there is not always a clear differentiation between contrast enhancing tumor and peritumoral edema.[15] It is clear from this study that MRI is superior to CT in delineating the extent of tumor. Sagittal plane imaging and absence of bone artifact in the posterior fossa can explain this supremacy.

No lesions were missed by MRI which were seen by CT scan. The reverse is not true. This study shows one patient whose CT was normal on two occasions and whose MRI detected a large brain stem glioma filling the medulla. Other studies found up to six patients with abnormal MRIs with corresponding normal CT scans.[15]

TABLE 1

	Normal	Abnormal	Total
MRI	0 (0%)	21 (100%)	21
CT Scan	1 (4%)	21 (96%)	22
EEG	4 (36%)	7 (64%)	11 (9 patients)
BAER	7 (47%)	8 (53%)	15 (12 patients)
VER	6 (100%)	0	6
SSER	4 (80%)	1 (20%)	5
Myelogram	1 (cisternogram(50%))	1 (50%)	2
Angiogram	0	7 (100%)	7
Skull X-ray	2 (100%)	0	2
CSF	7 (87%)	1 (13%)	8

With MRI, malignant tumors show increased T_1 and T_2. A short T_1 may be seen from lipid or hemorrhage within the tumor. MRI is generally more sensitive than CT for detecting tumors and mass effects. CT is useful for detection of calcium and bone changes. Cyst formation, necrosis, and edema show increased T_1 and T_2. Abscesses have also shown increased T_1 and T_2 with mass effect, so other diagnoses must be included in the differential. In this study, T_1-weighted sequences provide better anatomic definition, while T_2-weighted images are useful in showing tumor extent. CT showed cystic changes more clearly than MRI.

Advantages of MRI include safety (no radiation exposure), freedom from bone and pantopaque artifacts, choice of image plane (axial, coronal, and sagittal), and better imaging of tumor extent.[16] Patients treated with radiation therapy have displayed more extensive changes in surrounding brain with MRI compared to CT.[17] Thus, follow-up with patients who have been radiated seems indicated. Differentiation of intrinsic and extrinsic tumor is easier with MRI than with CT. Disadvantages of MRI include longer study time, expense, inability to safely study patients with cardiac pacemakers, patients on respirators and patients with cerebral aneurysm clips, and the ability of CT to better delineate calcification.

Angiography will often identify the lesion's presence, but does not define the extent of the tumor the way MRI does. CT cisternography may be useful in demonstrating exophytic lesions and subtle changes of the brain stem and surrounding CSF spaces.[18,19,20]

Conclusion

Biopsies of brain stem tumors, particularly brain stem gliomas, are seldom performed. The majority of patients treated with radiotherapy are done so without the benefit of histological confirmation. Therefore, in addition to a complete history and physical examination, radiological evaluation becomes important. Currently, a diagnosis may be made with sufficient certainty by CT and/or MRI. CT and MRI are complementary. The surgeon's task of biopsy and the radiation therapist's attempts at treatment of these tumors are easier with CT and MRI, although survival statistics remain poor.

Brain stem evoked responses are often helpful, but usually cannot provide the information of CT or MRI. The use of MRI with paramagnetic contrast agents may make MRI even more useful in the future by more accurately separating tumor and edema (*Table 4*).

REFERENCES

1. Strange P, Wohlert L: Primary brain stem tumors. *Acta Neurochirurgica*, 62:219-232, 1982.

2. Adams RD, Victor M: Intracranial neoplasms: *Principles of Neurology*. New York, McGraw-Hill Book Company, p. 467, 1981.
3. Ausman I, Frency LA, Baker AB: Intracranial neoplasms, in Baker AB: *Clinical Neurology*. Philadelphia, Harper and Row Publishers, Vol. 2, Chapter 14, p. 37, 1984.
4. Albright LA, Price RA, Guthkelch AN: Brain stem gliomas in childhood. *Cancer*, 52:2313-2319, 1983.
5. Tomita T, McLone DG, Naidich TP: Brain stem gliomas in childhood. *Journal of Neuro-Oncology*, 2:117-122, 1984.
6. Berger MS, Edwards MSB, Lamaster D, Davis RL, Wilson CB: Pediatric brain stem tumors: radiographic, pathological, and clinical correlations. *Neurosurgery*, 12:298-302, 1983.
7. Mantravadi RVP, Rhatak R, Bellur S, Liebner EY, Haas R: Brain stem gliomas: an autopsy study of 25 cases. *Cancer*, 49:1294-1296, 1982.
8. Steele J, Hoffman JC: Brainstem evaluation with CT cisternography. *AJR*, 136:287-292, 1981.
9. Kingsley DPE, Kendall BE: The CT scanner in posterior fossa tumours of childhood. *British Journal of Radiology*, 52:769-776, 1979.
10. Markand ON: Brainstem auditory evoked responses. *Evoked Potential Seminar*, p. 27, 1984.
11. Chiappa KH: Brainstem auditory evoked potentials: evoked potentials in *Clinical Medicine*. New York, Raven Press, p. 188, 1983.
12. Stockard JJ, Stockard JE, Sharbrough FW: Detection and localization of occult lesions with brainstem auditory responses. *Mayo Clinic Proceedings*, 52:761-769, 1977.
13. Martinez-Arizala A, Brown CD, McCarty GE: Auditory evoked potentials in bliomas of the brain stem. *Archives of Neurology*, 40:769-771, 1983.
14. Lee BCP, Kneeland JB, Deck MDF, Cahill PT: Posterior-fossa lesions: magnetic resonance imaging. *Radiology*, 153:137-143, 1984.
15. Weinstein MA, Modic MT, Pavlicek W, Keyser CK: Nuclear magnetic resonance for the examination of brain tumors. *Seminars in Roentgenology*, 19:139-147, 1984.
16. Bydder GM, Steiner RE, Thomas DJ, Marshall J, Gilderdale DJ, Young IR: Nuclear magnetic resonance imaging of the posterior fossa: 50 cases. *Clinical Radiology*, 19:139-147, 1983.
17. Glanz S, Geehr RB, Duncan CC, Piepmeier JM: Metrizamide-enhanced CT for evaluation of brainstem tumors. *AJR*, 134:821-824, 1980.
18. Mawad ME, Silver AJ, Hilal SK, Ganti SR: Computed tomography of the brainstem with intrathecal metrizamide. Part I: The normal brainstem. *AJR*, 140:553-563, 1983.
19. Mawad ME, Silver AJ, Hilal SK, Ganti SR: Computed tomography of the brainstem with intrathecal metrizamide. Part II: Lesions In and around the brainstem. *AJR*, 140:565-571, 1983.

Look-Alike and Sound-Alike Drug Names

BENJAMIN TEPLITSKY, R. PH.
Brooklyn, N.Y.

Look-alike and sound-alike drug names can be misinterpreted by a nurse reading doctors' orders or by a pharmacist compounding physicians' prescriptions. Such misunderstandings can result in the administration of a drug not intended by the prescriber. Awareness of such look-alike and sound-alike drug names can reduce potential errors.

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Category:	Estrogen	Antibiotic
Brand Name:	Diethylstilbestrol, Lilly	E.E.S., Abbott
Generic Name:	Diethylstilbestrol	Erythromycin Ethylsuccinate
Dosage Forms:	Tablets	Tablets, Suspension, Powder for Oral Suspension

	NUBAIN	NAVANE
Category:	Narcotic Analgesic	Antipsychotic
Brand Name:	Nubain, DuPont	Navane, Roerig
Generic Name:	Nalbuphine HCl	Thiothixene
Dosage Forms:	Injection	Capsules, Injection, Concentrate

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For Brief Summary, please see following page.

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Indications: Symptomatic relief of signs and symptoms of idiopathic decline in mental capacity (i.e., cognitive and interpersonal skills, mood, self-care, apparent motivation) in patients over sixty. It appears that individuals who respond to HYDERGINE therapy are those who would be considered clinically to suffer from some ill-defined process related to aging or to have some underlying dementing condition, such as primary progressive dementia, Alzheimer's dementia, senile onset, or multi-infarct dementia. Before prescribing HYDERGINE® (ergoloid mesylates), the physician should exclude the possibility that signs and symptoms arise from a potentially reversible and treatable condition, particularly delirium and dementiform illness secondary to systemic disease, primary neurological disease, or primary disturbance of mood. Not indicated for acute or chronic psychosis regardless of etiology (see Contraindications).

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Contraindications: Hypersensitivity to the drug; psychosis, acute or chronic, regardless of etiology.

Precautions: *Because the target symptoms are of unknown etiology, careful diagnosis should be attempted before prescribing HYDERGINE (ergoloid mesylates) preparations.*

Adverse Reactions: Serious side effects have not been found. Some transient nausea and gastric disturbances have been reported, and sublingual irritation with the sublingual tablets.

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Talluri Balaji, M.D., Bedford, urological surgery.

Michael J. Burrell, M.D., Muncie, general surgery.

Joseph H. Clark II, M.D., Indianapolis, pediatrics.

Richard C. Gingery, M.D., Bristol, family practice.

Gregory D. Hewitt, M.D., Hanna, family practice.

Frederick M. Kelvin, M.D., Indianapolis, radiology.

L. Jay Matchett, M.D., Muncie, orthopedic surgery.

Don G. McDowell, M.D., Muncie, anesthesiology.

Helen L. Morrison, M.D., Michigan City, psychiatry.

Donald M. Perez, M.D., Anderson, ophthalmology.

Derinda A. Radjeski, M.D., Kokomo, pediatrics.

M. Kathleen Reilly, M.D., Indianapolis, cardiovascular diseases.

Jaime A. Salomon, M.D., Indianapolis, family practice.

M. Saleem Seyal, M.D., Jeffersonville, cardiovascular diseases.

Lloyd C. Trommler Jr., M.D., Jeffersonville, internal medicine.

Charles D. Williams, M.D., Merrillville, general surgery.

John D. Wulff, M.D., Muncie, neurology.

Residents:

Ramesh B. Bakane, M.D., Marion, urological surgery.

Teresa A. Beckman, M.D., Evansville, family practice.

Timothy N. Brown, M.D., Crawfordsville, family practice.

Joseph S. Chiang, M.D., Indianapolis, family practice.

Charles W. Coats, M.D., Indianapolis, psychiatry.

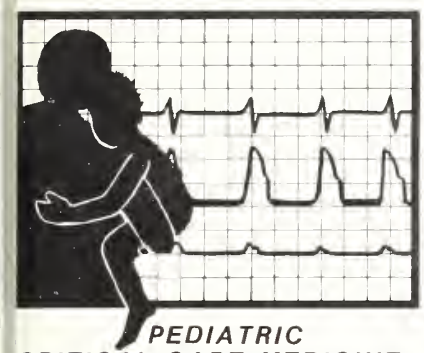
Vincent L. Fragomeni, M.D., Indianapolis, orthopedic surgery.

Lester A. Hart, D.O., Tipton, general practice.

George A. Karagory, M.D., Bluffton, internal medicine.

CONTINUED ON PAGE 1053

Neonatal Resuscitation: Review and Update



PEDIATRIC
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MARY JO STINE, M.D.
Indianapolis

BIRTH—at no other time in life is resuscitation more frequently required or likely to have such long-term ramifications. The human fetus is vulnerable to asphyxia from umbilical cord and placental problems. The human newborn, and especially the premature newborn, is also at risk for asphyxia when there is failure of the lungs to inflate and pulmonary blood flow to increase at the time of birth. Resuscitation is essentially a reversal of the pathophysiology of asphyxia. Optimal resuscitation of a newborn requires a team knowledgeable and experienced in the principles and practice of neonatal resuscitation.

Pathophysiology of Asphyxia

The clinical course of perinatal asphyxia varies depending on the extent and duration of the asphyxial insult. In its early stages, asphyxia may reverse spontaneously. Once asphyxia progresses to a more severe state with circulatory and neurological changes, spontaneous reversal is unlikely. Early in asphyxia cardiac output is maintained although its distribution is altered to shunt blood to vital organs including brain, heart and adrenal gland. Additionally, the newborn makes ventilatory efforts during the early stage.

As asphyxia becomes more severe, myocardial function decreases and the newborn becomes increasingly bradycardiac. The respiratory center is depressed and the chances of a newborn spontaneously establishing effective ventilation diminish. Brain injury may begin during this phase.

Physiology and Resusciation

The physiology of resuscitation is essentially a reversal of the pathologic changes associated with asphyxia. If asphyxia has progressed to myocardial failure, indicated by significant bradycardia or asystole, resuscitation must include restoration of cardiac output in addition to establishing effective ventilation and oxygenation. Cardiac massage should be initiated until hypoxia and severe acidosis are corrected, and pulse and blood pressure established. The newborn may have intense pallor of the skin from peripheral vasoconstriction. If the asphyxia is not so severe and myocardial function is intact, resuscitative efforts are concentrated on oxygenation and effective ventilation in order to correct hypoxia and acidosis.

When the changes of asphyxia are alleviated, the newborn will usually begin spontaneous respirations. The duration of the asphyxial insult is generally proportional to the amount of resuscitation time to achieve spontaneous respiratory effort. Serial

TABLE 1
Delivery Room Equipment List

*infant stethoscope
*bag & mask (premature & newborn sizes)
*endotracheal tubes (with stylet available)
*laryngoscope handle & blades
*bulb syringe
*oxygen (wall & portable)
*mucus traps
*suction catheters & wall suction
*cord clamps
*drugs (see Table 2), syringes, intravenous lines, flush, umbilical catheters, stopcocks, sterile gloves

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(every five minutes) Apgar scores are helpful in determining this recovery time.

Sequence of Resuscitation

I. Preparation

Preparation involves not only maintaining the necessary equipment (*Table 1*) but also communication among personnel. Both medical and nursing team members should be trained in delivery room techniques. Providing warmth to a newborn is essential to optimizing outcome. Keeping an open warmer on at all times insures a warm environment for an unexpected or precipitous birth. The laryngoscope should be checked prior to a delivery to insure proper lighting and blade size (Miller Size 0 is appropriate for most newborns.) All sizes of endotracheal tubes (2.5-4) should be available. A resuscitation bag, preferably with a pop-off valve (30-35 cm water pressure), should be properly assembled and capable of delivering 100% oxygen. Both premature and newborn mask sizes should be accessible.

II. Initial Treatment

The asphyxiated newborn should be quickly transferred to an open warmer and dried off. While monitoring heart rate, the ventilatory status should be assessed. If respirations are inadequate or are not established after brief stimulation, assisted ventilation and oxygenation by bag and mask are initiated. If bradycardia (heart rate less than 80) does not respond within 30 to 60 seconds to ventilation, cardiac massage is begun and endotracheal intubation attempted. Epinephrine and atropine (*Table 2*) can be administered via an endotracheal tube (ETT) by injecting the intravenous preparation from a syringe directly into the endotracheal tube, followed by manual ventilation. In severe asphyxia, an arterial blood gas (umbilical artery line or peripheral arterial stick) is essential to guide further resuscitative efforts. Sodium bicarbonate is indicated if severe metabolic acidosis is present.

TABLE 2
Essential Drugs for Neonatal Resuscitation

DRUG	INDICATION	DOSE	ROUTE
Epinephrine (1:10,000)	bradycardia	0.1cc/kg	IV,ETT
Atropine	bradycardia	0.01mg/kg	IV,ETT,IM
Narcan	narcotic depression	0.01mg/kg	IM,IV,SC
Sodium bicarbonate	metabolic acidosis	1-2mEq/kg	IV(slow)
Calcium	low cardiac output	100mg/kg	IV(slow)
Glucose	hypoglycemia		
25% dextrose		1-2ml/kg	IV
10% dextrose		5-10ml/kg	IV

The bicarbonate is given intravenously over three to five minutes and, ideally, when ventilation is effective and the p_aCO_2 is normal.

III. Re-evaluation

After initial stabilization, ventilatory and cardiac status should be re-evaluated. Ventilator adjustments are made based on arterial blood gas results. A chest radiograph is helpful in evaluating aeration, endotracheal tube placement and the possibility of pneumothorax. Intravenous access can be established if not previously accomplished. Fluids should be limited to 40-60cc/kg/day unless there is evidence of hypovolemic shock. Dextrostix determinations guide glucose administration to prevent hypoglycemia (Dextrostix less than 40.) If there is evidence of cardiomyopathy, continuous dopamine infusion should be considered for blood pressure support.

IV. Recovery

Postasphyxial problems may involve many body systems and may require several days of intensive care support until recovery occurs. Central nervous system injury often presents as encephalopathy with cerebral edema and seizures. Steroids and diuretics are of unproven efficacy. Seizures generally occur within the first 24 hours and require high doses of phenobarbital for control (load with 20 mg/kg). Acute tubular necrosis is the most common renal consequence of asphyxia. The oliguric phase is managed with fluid restriction and the polyuric phase that follows calls for careful attention to sodium as well as fluid replacement. Metabolic complications may include hypocalcemia, hypokalemia and hypoglycemia.

Neonatal Resusciation Tips

1. Avoid excessive fluid administration for hypotension. Many asphyxiated newborns have cardiomyopathy and oliguria and will develop congestive heart failure. We consider treatment if the mean blood pressure is less than 30 in a term baby or 20 in a premature newborn if perfusion appears adequate.

2. Avoid aggressive alkali therapy. Sodium bicarbonate administration can result in hypernatremia, hyperosmolality, volume overload and worsening acidosis (if ventilation is inadequate.) Only severe metabolic acidosis requires correction; mild-to-moderate acidosis (pH greater than 7.2) usually corrects spontaneously.

3. Avoid overuse of a stylet during intubation. A stiff endotracheal tube, although often easier to insert, can perforate the trachea, occlude the airway if not removed promptly, or, when removed, dislodge the endotracheal tube.

Special Circumstances

1. Meconium-stained amniotic fluid:

Meconium stained fluid occurs in up to one-third of deliveries. Aspiration of meconium can usually be prevented by perineal suctioning of the oro- and nasopharynx after delivery of the head, followed by visualization of the vocal cords and, if meconium is seen, intubation with suctioning.

2. Myelomeningocoele: A myelomeningocoele, frequently accompanied by hydrocephalus, can be diagnosed at birth. The defect should be covered with moist sterile gauze and the newborn referred to a neurosurgeon as soon as possible.

3. Omphalocoele and gastroschisis: Initial management of these abdominal wall defects is extremely important. A nasogastric tube should be inserted, sterile saline compresses applied and intravenous fluids (including colloid) begun. These babies are at increased risk for hypothermia and dehydration. Once stablized, surgical correction can be attempted.

Maternal Transport

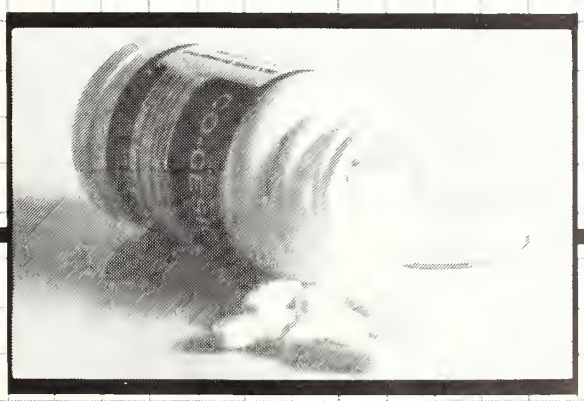
The complexity of the management of an asphyxiated newborn necessitates tertiary-level care. Every newborn should be able to receive optimal resuscitation no matter where the birth occurs. If significant neonatal problems are anticipated, the baby's outcome is generally better if he can be transported to a tertiary center prior to delivery. There optimal resuscitation can be provided for even the smallest and most immature neonates.

RECOMMENDED READING

1. American Academy of Pediatrics and American College of Obstetricians and Gynecologists. Guidelines for Perinatal Care. AAP, Chicago, 1983.
2. Daze AM, Scanlon JW: Code Pink: A Practical System for Neonatal/Perinatal Resuscitation. University Park Press, Balitmore, 1981.
3. Nelson NM: Current Therapy in Neonatal-Perinatal Medicine 1985-1986. The C.V. Mosby Company, St. Louis, 1985.
4. Roberts DJ: Neonatal Resuscitation: A Practical Guide. Academic Press, New York, 1981.

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5. VIRUS INFECTIONS

BRIAN POTTER, M.D.
Michigan City

THE VIRAL EXANTHEMS, rubella, rubeola, roseola, erythema infectiosum and others, each exhibit a characteristic rash. This probably represents an immunological reaction, which takes about two weeks to develop, rather than specific infection of the skin.

Tick-borne rickettsial purpuric fevers are seen only rarely, in travelers from the Rocky Mountains. Pox virus eruptions have almost disappeared, except for varicella, since variola has been eradicated and vaccination discontinued. Specific infections of the skin are now caused chiefly by two other classes of virus, namely herpesvirus hominis and human papilloma viruses.

Various antigenically heterogeneous types of human papilloma virus cause common warts and plantar warts, condyloma accuminata and laryngeal papillomas. Condylomas can be treated by the application of podophyllin, which is the crude aqueous extract from the root of two related Podophyllum plants. The main active constituent is podophyllotoxin, a mitotic-spindle poison, which binds with the microtubule protein and interferes with the assembly of microtubules in the mitotic apparatus to arrest cells in metaphase.

Podophyllin may be applied, carefully, at weekly intervals, to condylomas in intertriginous skin folds, as a 25% solution in alcohol, propylene glycol or U.S.P. tincture of benzoin. The application should be removed with soap and water within four hours, in order to avoid severe local reaction. Alternatively, lotion or cream of 5-fluorouracil (1% Fluoroplex, 2-5% Efudex) may be applied daily or twice daily. This acts by combining with nucleoproteins, and irritates the skin, but has a greater effect on the wart. Vidarabine (Vira-A 3% ointment) and idoxuridine (Stoxil 0.5% ointment) are also effective.

The viral soft tumor molluscum contagiosum usually appears as multiple lesions, and commonly in children. These lesions can be treated by the application, carefully to each one, of cantharidin 0.7% in a flexible collodion base (Cantharone, Verr-canth), or by simple curettage.

Herpes simplex used to be sufficiently common that most adults had complement-fixing antibodies to the virus. This is evidence of prior infection, and provides a considerable degree of immunity. The prevalence of antibody has declined, however, especially in higher socioeconomic groups. About 38% of the population report recurrent lesions due to periodic reactivation of virus.[1] The relative increase in frequency of genital herpes is probably due, in part, to the preference for oral contraceptives, which do not protect against the virus, over the condom and spermicidal vaginal creams, which do give some protection.

Herpes simplex is caused by two strains of the herpesvirus, HSV-1 and HSV-2. Facial herpes, the common cold sore, is usually due to HSV-1, but the virus can cause lesions on any part of the body. About 32-37% of herpes genitalis is due to HSV-1, this disease being usually due to HSV-2. Patients with antibodies to one are still at some risk of infection with the other. Genital infections by HSV-1 and HSV-2 have occurred sequentially, and even simultaneously.[2]

As a rule, however, the only form of herpes that causes much morbidity is infection by the virus for the first time.[3] The primary complex of herpes simplex can occur on any part of the skin, for instance as acute gingivostomatitis in children, herpetic whitlow in hospital and laboratory workers, acute membranous pharyngitis, or on the genitalia.

The first episode of genital herpes usually gives rise to local pain and itching, tender regional lymphadenopathy in 80% of subjects, several bilateral pustular ulcerated lesions lasting as long as 19 days, systemic symptoms, and dysuria in 63%.[4]

Secondary recurrent lesions are much more common, consisting only of small unilateral vesicular lesions, possibly becoming ulcerated, and about 25% are asymptomatic. Recurrent herpes is a trivial disease, except that it is contagious.

In patients who request treatment, there is often a gratifying response to

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placebo, in 77% of patients with herpes simplex. Patients who are prescribed almost any form of harmless topical treatment tend to feel better than those left untreated, reporting reduction in severity and duration of lesions.[5]

The only risk of severe illness from these viruses is in immunocompromised patients, those with eczema or extensive burns, and in the newborn. In mucocutaneous infections caused by the herpes simplex virus, chemotherapy is indicated only in these patients and in the primary infections. The drug available for these cases is acyclovir, although intravenous vidaribine can also be used for herpes encephalitis if necessary.

Most antiviral agents active against the herpesvirus hominis belong to the class of compounds known as nucleosides. Acyclovir is an acyclic purine analog of a naturally occurring nucleoside, guanosine. It is a potent inhibitor of both types of herpes simplex and varicella-zoster virus. The drug has low toxicity for normal host cells, this selectivity being due to the presence in the virus of the code for a viral-specified thymidine kinase, capable of phosphorylating acyclovir to a monophosphate, acyclo-GMP. This is subsequently converted by cellular enzymes to acyclo-GIP, which persists in the infected cells. Acyclo-GTP is a more potent inhibitor of viral than of cellular DNA-polymerases. Furthermore, DNA-polymerases of the herpesvirus utilize acyclo-GTP as a substrate to incorporate acyclo-GMP into the DNA primer-template, to a much greater extent than do the cellular enzymes. The viral DNA-polymerase binds strongly to the acyclo-GMP-terminated template, and thus is inactivated.[6]

In patients with primary herpes genitalis, topical acyclovir shortens the duration of local pain, itching and time to healing. Duration of virus shedding is shortened in both initial and recurrent herpes genitalis.

Treated by topical application of Zovirax 5% ointment, q.i.d. for seven days, immunocompromised patients suffer less pain, and lesions cease shedding virus particles significantly more rapidly, than controls. However, healing time is not shortened.

No clinical benefit has been observed from topical treatment with acyclovir in patients with recurrent herpes simplex. Reduction in excretion of virus occurs, but only in patients who begin treatment within eight hours of the onset of lesions. Neither the frequency of recurrences nor the intervals between them are affected by topical acyclovir therapy.[7]

Oral acyclovir, given as five doses daily of 200mg over 10 days, shortens the course of primary genital herpes by about six days. Specifically, the duration of viral shedding is reduced; there is a dramatic decrease in new lesion formation after 48 hours; usually no new lesions after the fourth day; and the duration of pain is reduced. However, there is no effect on the interval to the first recurrence or on frequency of recurrences.[8]

Children with eczema secondarily infected with extensive herpes simplex show a good clinical response when treated orally in doses of 25mg/kg/day for five days. This avoids the necessity for intravenous acyclovir.[9]

In cases of recurrent genital herpes treated with oral acyclovir, the duration of viral shedding and the time to the stage of crusting and healing are reduced, but the formation of new lesions is only decreased, compared with placebo, when the drug is self-administered within the first 48 hours. There is no effect on itching, pain, or interval before recurrence.[10]

When the five-day treatment of an acute episode is followed by maintenance therapy of three daily doses of 200mg, the frequency of recurrence is reduced to about one fourth of a control group. The mean time to recurrence is delayed to 100-120 days, compared with the 14-25 days of placebo-treated patients. Breakthrough recurrences are due to drug-resistant virus. Continuance of the five-daily dose is more effective than a reduction to twice daily, against breakthrough recurrence.[11,12]

This regimen may be recommended for immunodeficient patients, but it does not influence the long-term history of the disease. After discontinuing the maintenance therapy, the subsequent recurrence rate returns to pretreatment rates. The time to recurrence is briefer after discontinuance of a maintenance dose of two capsules daily than of five doses.[13]

Oral acyclovir is well tolerated. Peak plasma levels are found at 1.5-1.75 hours after ingestion. Elimination half-life in humans is three to four hours, depending on renal function. The principal route of clearance is renal. The drug is excreted chiefly as unchanged acyclovir, and to a lesser extent in the form of derivatives of methylguanine.

Resistance to acyclovir occurs through genetic mechanisms. This is mediated by two genetic loci on the herpes virus genome. The acyclovir molecule cannot be phosphorylated by mutant viruses deficient in the expression of the enzyme thymidine kinase, and with consequent altered substrate specificity. The drug therefore remains inactive. Other mutations conferring resistance to acyclovir are closely linked to the DNA polymerase locus. Resistance arising during therapy, however, does not appear to be associated with increased virulence.

In the acute stage of herpes zoster, caused by the varicella virus, there is some evidence that the infection is arrested if oral acyclovir is given within 24 hours of the appearance of the eruption.[14] However, intravenous acyclovir is significantly effective. Within the first two weeks, pain disappears more quickly, particularly in patients over 65, in whom treatment is started within three days of onset, or with fever. The incidence of post-herpetic pain is not altered. Resistance of zoster-varicella virus to acyclovir is also acquired, through diminished phosphorylation of the drug, presumably from loss of function of

viral-specific thymidine kinase.

Systemic corticosteroids, however, are the standard treatment for herpes zoster, at least for patients over 50. It is advisable to prescribe these, for both therapeutic and medical-legal reasons, in the absence of any contraindication. The reason for this is that steroids reduce the incidence and duration of post-herpetic neuralgia. Healing is also significantly more rapid in steroid-treated patients.[15]

Zoster-immune globulin does not affect herpes zoster, but may prevent varicella in exposed, susceptible, immunocompromised patient.[15]

REFERENCES

1. Herpes simplex—changing patterns. *Lancet*, 2:1025-1026, 1981.
2. Fife KH, *et al*: *J Infect Dis*, 1983 (Jan): p 163.
3. Corey L, Holmes KK: Genital herpes simplex infections: current concepts in diagnosis, therapy and prevention. *Ann Internal Med*, 98:973-983, 1983.
4. Corey L, *et al*: Genital herplex simplex virus infections: clinical manifestations, course and complications. *Ann Internal Med*, 98:958-972, 1983.
5. Guinan ME, *et al*: Topical ether and herpes simplex labialis. *JAMA*, 243:1059-1061, 1977.
6. Proceedings of a symposium on Acyclovir. *Amer J Med*, 73:#1A, 1982.
7. Guinan ME: Therapy for symptomatic genital herpes simplex virus infection: a review. *Rev Infect Dis*, 4:supplement, Nov—Dec 1982.
8. Bryson YJ, *et al*: Treatment of first episodes of genital herpes simplex virus infection with oral acyclovir. *N Engl J Med*, 308:916-921, 1983.
9. Woolfson, H: Oral acyclovir in eczema herpeticum. *Brit Med J*, 288:531-532, 1984.
10. Reichman RC, *et al*: Treatment of recurrent genital herpes simplex infections with oral acyclovir. *JAMA*, 251:2103-2107, 1984.
11. Straus SE, *et al*: Suppression of frequently recurring genital herpes. *N Engl J Med*, 310:1545-50, 1984.
12. Douglas JM, *et al*: A double-blind study of oral acyclovir for suppression of recurrences of genital herpes simplex virus infection. *N Engl J Med*, 310:1551-6, 1984.
13. Straus SE, *et al*: Oral Acyclovir to suppress recurring herpes simplex virus infections in immunodeficient patients. *Ann Internal Med*, 100:522-524, 1984.
14. Peterslund NA, *et al*: Oral and intravenous acyclovir are equally effective in herpes zoster. *J Antimicrob Chemother*, 14:185-189, 1984.
15. Groth KE, *et al*: Evaluation of zoster immune plasma. *JAMA*, 239:1877-1879, 1973.

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Judges will consist of two specialists within the field of the article, three medical education directors from Indiana institutions with approved residency training programs, and one member of the INDIANA MEDICINE Editorial Board.

Authors of the articles judged to be the four best will receive prizes of $100 each, and an additional $100 prize will be given to the best article of the four.

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Weaning from Mechanical Ventilation

Critical Care Medicine

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When the Problem Requiring Mechanical Ventilation Has Stabilized, Efforts to Discontinue Ventilator Support Should Begin . . .

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WEANING A PATIENT from mechanical ventilation is best considered at the time mechanical ventilation is initiated. When the problem requiring mechanical ventilation has stablized, efforts to discontinue ventilator support should begin. The term "weaning" is, however, somewhat misleading because the patient is not "weaned" in the usual sense of becoming accustomed to decreased dependency. On the contrary, the patient is merely removed from the ventilator when ventilatory support is no longer needed. Thus, it is important for the physician to determine when the indications for ventilatory assistance are no longer met. To promote the expedient recovery and rehabilitation of the patient, this determination should be made at the earliest point possible. Many criteria which help physicians make this determination have been applied.

Clinical stability of the patient must be the first criterion used in making the decision to withdraw ventilatory assistance. The underlying problem which created the requirement for mechanical ventilation must be resolved or substantially treated before considering withdrawal of ventilatory support. In addition, all complicating conditions must be corrected or stabilized. Such conditions include infection, anemia, hypotension, abnormalities in fluid balance, abnormalities in mental status, pain, renal failure, arrhythmias, electrolyte abnormalities, or sleep deprivation. Once these conditions have resolved or are adequately controlled, predicting the time for successful weaning becomes imperative. An accurate prediction allows the efficient use of critical care resources, focuses "weaning" efforts on patients most likely to be successfully weaned and avoids the physical and psychological frustration of multiple failed attempts in patients who continue to require ventilatory support.

Predictions for successful weaning have been proposed based on findings from many clinical studies.[1,3,4,5] Measurements which reflect the mechanical functions of the lung, as well as those assessing the efficiency of gas exchange are used. It is appropriate for physicians to keep in mind that the criteria proposed are intended only as guidelines. If "weaning" criteria are set sufficiently high that all patients meeting the criteria are successfully weaned, some patients will have had weaning delayed unnecessarily. Conversely, if the criteria are set too low, many patients will fail the weaning attempt and could suffer medically and psychologically from that failure.

I support the following measurements of mechanical functions of the lung as weaning criteria (*Table 1*). The guideline for vital capacity is based on the observation that the average patient is unable to breathe spontaneously for an appreciable length of time if the vital capacity is less than suggested. Investigators have also determined that a vital capacity less than one liter predicts an increased incidence of atelectasis.[1] Atelectasis increases the risk of hypoxemia because of the continued perfusion of underventilated regions of lung and atelectasis also increases morbidity from pulmonary infection.

If the patient has a minute ventila-

tion less than 10 liters per minute and is able to double minute ventilation with a maximal voluntary effort, we can predict successful weaning. This measurement suggests that the patient has a low resting ventilatory requirement and has sufficient reserve to support spontaneous ventilation.

When the maximum inspiratory force generated by the patient exceeds minus 20 centimeters of water, successful weaning is also predicted. A negative pressure manometer attached to the endotracheal tube is used to monitor inspiratory effort. This measurement reflects muscular strength, and also ensures that the patient is alert enough to generate such a force.

The measurement of dead space to tidal volume ratio is sometimes useful to predict the timing for successful weaning. A large ratio of dead space with respect to tidal volume indicates ineffective ventilation because a large part of the tidal volume does not contribute to alveolar ventilation. Measurement of this ratio can be helpful in patients such as those recovering from multiple pulmonary emboli. In these patients the ratio decreases as the match between ventilated and perfused lung improves. The ratio of dead space to tidal volume, or Vd/Vt, is measured by considering each tidal breath (Vt) as a volume corresponding to the physiologic dead space (Vd) plus an alveolar component (VA). The partial pressure of CO2 in the dead space gas is assumed as zero and that in alveolar gas is assumed to be equal to that in the arterial blood (PaCO2). The partial pressure of CO2 in mixed expired gas (PECO2) is lower than that in alveolar gas due to the dilution of dead space gas. Thus, by sampling arterial blood during the collection of expired gas and determining the partial pressure of CO2, Vd can be calculated: Vd = Vt (PaCO2-PECO2) /PaCO2.[2]

These measurements can be useful as guidelines for predicting successful weaning of patients who require mechanical ventilation for a short time, such as post-operative patients. Those patients who had normal lungs initially, received little post-operative analgesia, and are free of significant atelectasis, can usually be "weaned" by a brief T-Tube trial.

TABLE 1
Proposed Criteria for Weaning

Vital Capacity > 10 ml/kg
Resting Minute Ventilation < 10 L/min
Tidal Volume > 5 ml/kg
Maximal Voluntary Ventilation > Twice Minute Ventilation
Maximal Inspiratory Force at Least -20 cm H20 (1)

Controversy over the best technique for weaning patients from mechanical ventilation is common. One technique which has many advocates is intermittent mandatory ventilation (IMV), a form of mechanical ventilation that allows for spontaneous respiration of a given inspired oxygen concentration while a specified tidal volume is delivered at a specified frequency. During weaning, the preset tidal volume is delivered at decreasing frequency while spontaneous respiration supports an increasing proportion of the patient's minute ventilation. The other technique advocated is known as "traditional" weaning. Patients weaned by this method spend gradually increasing periods of spontaneous ventilation on a T-piece interspersed with periods of mechanical ventilation.

There is usually no need for controversy. Many patients can be successfully weaned by either method, if the method is properly used. Neither method can substitute for careful clinical observation of the patient by medical, nursing and respiratory therapy staff. A common error in traditional weaning occurs when reliance on the results of arterial blood gas tests supersede experienced clinical evaluation. Thus, clinically fatigued patients are stressed beyond their ventilatory capabilities because their "gases are good." In contrast, a more common problem in weaning by IMV occurs when the weaning period is prolonged, causing an increase in the work of breathing and respiratory muscle fatigue. These adverse effects are due to the patients' efforts to breathe against the resistance of the ventilator IMV circuit, as well as the resistance of the endotracheal tube. Therefore, each method has advantages and disadvantages which must be understood before the best method can be chosen for a given patient. There are insufficient data to support a dogmatic approach. A comparison between a spontaneous ventilator trial and weaning by Intermittent Mandatory Ventilation (IMV) was conducted in a group of 28 patients two hours after coronary bypass surgery. There was no demonstrable difference between the two methods.[3] Both methods resulted in significant increases in oxygen consumption, and carbon dioxide production. There was no apparent cardiopulmonary advantage during IMV weaning in this group of stable postoperative patients.

Regardless of the method used, the physician must decide when weaning should begin. The ventilatory measurements (*Table 1*) are useful for predicting successful weaning after short-term mechanical ventilation, but may have a significant false-negative rate. In 21 of 33 postoperative patients who required short-term ventilation, weaning was successful by continually decreasing the IMV rate before the vital capacity or maximum inspiratory force met the criteria for conventional weaning.[4] Thus, these 21 patients would have experienced delays in weaning by the traditional method because the targeted ventilatory standards were excessive for them. In five

TABLE 2
Adverse Factors for Weaning

TACHYCARDIA	DEPRESSED LEVEL OF CONSCIOUSNESS
HYPOTENSION	AGITATION
FEVER	DEPRESSION
ELEVATED CENTRAL VENOUS or PULMONARY CAPILLARY WEDGE PRESSURE	MALNUTRITION
CARDIAC DYSRHYTHMIAS	VASOPRESSOR THERAPY
ABUNDANT THICK SECRETIONS	ANTIBIOTIC THERAPY
SEDATIVE THERAPY	PAIN

[MODIFIED FROM REF 5]

other patients from this study; the targeted ventilatory standards were too lenient. Although these five patients could generate the appropriate volumes and pressures on command and spontaneous respiratory rates were similar to the successfully weaned patients, their respirations were shallow and their respiratory drive inadequate to prevent respiratory acidosis.

Despite these shortcomings, the criteria for weaning (*Table 1*) have proved useful for patients after a short period of mechanical ventilation. However, until recently there was little information concerning the optimal weaning criteria for patients who required prolonged ventilatory support. A retrospective report analyzed 11 patients who were mechanically ventilated for 30 to 100 days.[5]

In this group of patients, spontaneous ventilatory measurements were not useful indicators of the patients' ability to wean. This lack of utility was determined by separating the hospital course and comparing the unsuccessful weaning periods and the progressive weaning periods for eight patients who were successfully weaned. The tidal volume, minute ventilation, maximum negative inspiratory force and the forced vital capacity were not significantly different between the unsuccessful and the successful weaning periods. In fact, in a few patients, weaning was successful despite deterioration in these spontaneous ventilatory measurements.

The concept of an "adverse factor score" was suggested, in the report, to improve the prediction for successful weaning in the patient who has required prolonged mechanical ventilation. The "adverse factors" considered the underlying medical and psychological condition of the patient (*Table 2*). Fever, hypotension, cardiac dysrhythmias, abundant secretions, abnormal levels of consciousness or emotional status were all considered "adverse factors." Including ventilator requirements improved the ability to separate successful from unsuccessful weaning periods. The requirement of a high fraction of inspired oxygen, of positive end expired pressure (PEEP), of a large minute ventilation, or evidence of decreased lung compliance were also considered "adverse factors."

In this retrospective review, it appeared that the major separation between unsuccessful and successful weaning periods was the patients' degree of underlying medical and psychological dysfunction. Thus, this study verified our first criterion for making the decision to withdraw ventilatory assistance—clinical stability of the patient.

We most often consider IMV rather than traditional weaning in the population of patients who have required prolonged mechanical ventilation. However, the superiority of IMV weaning has been difficult to demonstrate in clinical studies. One large retrospective study compared IMV weaning in 65 patients with conventional weaning in 58 patients.[6] The study failed to demonstrate acceleration of weaning by IMV. Indeed, there was evidence that the length of hospitalization was prolonged for patients weaned by IMV. However, this may have been due to the selection of IMV weaning for patients with underlying conditions likely to cause difficulty in weaning. Thus, it may indirectly support our belief that IMV is the superior technique for weaning the more difficult patient.

Patients with underlying chronic obstructive pulmonary disease are often difficult to wean. One reason for failure to wean such patients is that during mechanical ventilation the minute volume is adjusted to maintain a "normal" pCO2. When subsequent weaning is attempted, the pCO2 rises toward its usual level, often 60 to 70 mm Hg or higher. Since the bicarbonate buffering capacity has been depleted, respiratory acidosis ensues and requires continuing mechanical ventilation. We can often successfully wean these patients by gradually decreasing the mechanically supplied minute ventilation, allowing time for renal compensation to protect against the patient's usual respiratory acidosis. Because the acidosis is compensated by retention of bicarbonate, the patient is able to tolerate the often extremely high values for pCO2.

Another reason for failure to wean this type of patient is nutritional deficiency resulting from prolonged hospitalization and the underlying chronic illness. The subsequent muscular debility, particularly the compromised intercostal and upper abdominal muscles, make spontaneous ventilation difficult. Nutritional support, including enteral feeding and Total Parenteral Nutrition (TPN), in-

creases the rate of nutritional recovery and subsequent successful weaning. A retrospective study of 14 ventilator-dependent patients who received aggressive nutritional support, either enteral or TPN, correlated successful weaning with improved nutritional status, demonstrated by increased serum albumin or transferrin levels. Unsuccessful weaning was correlated with a failure to increase protein synthesis despite increased nutritional support.[7]

Once successful weaning is accomplished, the patient no longer requires mechanical ventilatory support. However, the decision to extubate the patient requires a separate evaluation. The patient should not be prematurely extubated. The physician must ensure that the patient is mentally alert and able to protect the airway, handle secretions and cooperate with maneuvers to manage atelectasis. When these criteria are met simultaneously with successful weaning, it is preferable to remove the endotracheal tube and its added resistance. However, when there is doubt about the patient's ability to defend the airway or cooperate with pulmonary toilet, extubation should be delayed.

In summary, the physician's ability to wean a patient from mechanical ventilation depends upon the patient's overall clinical status, as well as the patient's ventilatory function. We should initiate weaning as soon as the patient is clinically stable. Ventilatory standards for weaning are suggested as guidelines which must be tempered by the clinical course of the patient, and immediate extubation need not coincide with successful weaning.

REFERENCES

1. Sahn SA, Lakshminarayan S, Petty T: *JAMA*, 235:2208, 1976.
2. Fishman AP: Assessment of pulmonary function. McGraw-Hill, New York, 1980, p 232.
3. Prakash O, Meij S, Van Der Borden B: Spontaneous ventilation test vs. intermittent mandatory ventilation. *Chest*, 81:403, 1982.
4. Millbern SM, Downs JB, Jumper LC, Modell JH: Evaluation of criteria for discontinuing mechanical ventilatory support. *Arch Surg*, 113:1441, 1978.
5. Morganroth ML, Morganroth JL, Nett LM, Petty T: Criteria for weaning from prolonged mechanical ventilation. *Arch Intern Med*, 144:1012, 1984.
6. Schacter EN, Tucher D, Beck G: Does intermittent mandatory ventilation accelerate weaning? *JAMA*, 246:1210, 1981.
7. Larca L, Greenbaum DM: Effectiveness of intensive nutritional regimens in patients who fail to wean from mechanical ventilation. *Crit Care Med*, 10:297, 1982.

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Use of Thoracoscopy in the Management of Empyema Thoracis

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WHILE THORACOSCOPY has a definite place in the diagnostic evaluation of pleural effusion and pleural based diseases, application to therapeutic endeavors has been limited. In this report we describe the use of thoracoscopy in the treatment of empyema thoracis. Thoracoscopy aided in the placement of chest tubes and drainage of the empyema. Closed thoracostomy was ineffective due to pleural adhesions which restricted drainage. These were easily broken apart with the thoracoscope, allowing resolution of the empyema process.

Case Report

A 58-year-old white woman entered the hospital with complaints of cough, fever, and soreness in her right leg. Physical examination and chest x-ray revealed the presence of a right lower lobe pneumonia with the possibility of pleural fluid. A thoracentesis disclosed an exudative process with foul odor and a pH of 7.1. Cultures did not reveal any growth; however, the patient was on antibiotics prior to the pleural tap.

Clinically, it was felt the patient had an empyema related to a para-pneumonic effusion and that chest tube placement was warranted. This was undertaken using closed thoracostomy technique. Despite adequate placement of the chest tube with the patient in the left lateral decubitus position, the tube would retract out of the thoracic cavity due to the patient's obesity. While drainage of some pleural fluid occurred, complete resolution did not occur. Attempts to advance the chest tube met resistance, presumably due to adhesions.

Rather than proceed with further chest tube placements or an open thoracotomy, thoracoscopy was an alternative to allow adequate placement of the chest tubes. Under general anesthesia of short duration, the thoracoscope was introduced using a single puncture method. The pleura was biopsied and loculations were easily broken up with the thoracoscope so that all pleural surfaces could be identified. Two tubes were then placed in the chest cavity, one in the infrapulmonary area and one posteriorly. The patient tolerated the procedure satisfactorily and resolution of the empyema process occurred over the next several weeks. The patient developed a seizure disorder related to a cerebrovascular accident and had prolonged hospital course as a consequence. Eventually the patient was discharged.

Discussion

The use of pleuroscopy or thoracoscopy as a means of evaluating pleural space diseases dates back to 1910 when Jacobaeus first described its use.[1] Later, in the 1920s, he used a similar technique in a therapeutic manner to achieve pneumonolysis in collapse therapy for tuberculosis.[2] While the diagnostic applications of thoracoscopy have been expanded, little is reported in the literature concerning its therapeutic potential. Weisburg has reported on its therapeutic uses in multiple disease states including empyema.[3] Studying patients with pleural effusion who were not responding to standard treatment, he found that one-half of the patients in that series had an undiagnosed empyema and such unsuspected pathology as a retained surgical sponge, esophageal perforation from cancer and a tracheopleural fistula. Oakes, *et al* have also reported upon the use of thoracoscopy in the debridement of post-pneumonectomy empyema.[4]

Other applications of therapeutic thoracoscopy have included retrieval of foreign bodies from the pleural space, facilitation of talc installation for malignant pleural effusion, lysis of adhesions preventing pulmonary re-expansion for pneumothorax, and ligation of bleeding intercostal vessels following thoracic trauma.[2-5] Experience with all these techniques is rather limited at this time.

In our case, the thoracoscopic technique allowed for better definition of the problem and adequate placement of chest tubes. Adhesions were taken down with blunt technique using the thoracoscope and biopsy forceps.

The principles of management of empyema thoracis hinge upon the use of early thoracentesis for diagnosis of empyema in patients with para-pneumonic effusion and simple chest tube placement for drainage.[6] When an empyema is in its early stages, chest tube drainage can result in excellent success rates. However, as the empyema process matures, adhesions develop causing loculations to occur. When this oc-

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FIGURE 1



FIGURE 2



FIGURE 3

FIGURE 1: Radiograph showing right pneumonia and pleural effusion before treatment.

FIGURE 2: Chest x-ray showing positioning of chest tubes in the posterior chest and infra-pulmonary areas placed at the time of thoracoscopy.

FIGURE 3: Follow-up chest x-ray after treatment.

curs, chest tube drainage may be ineffective as noted in our case. In these instances more localized chest tube placement may be needed. Lastly, operative treatment in the form of pleural debridement and decortication may be undertaken in far advanced cases.

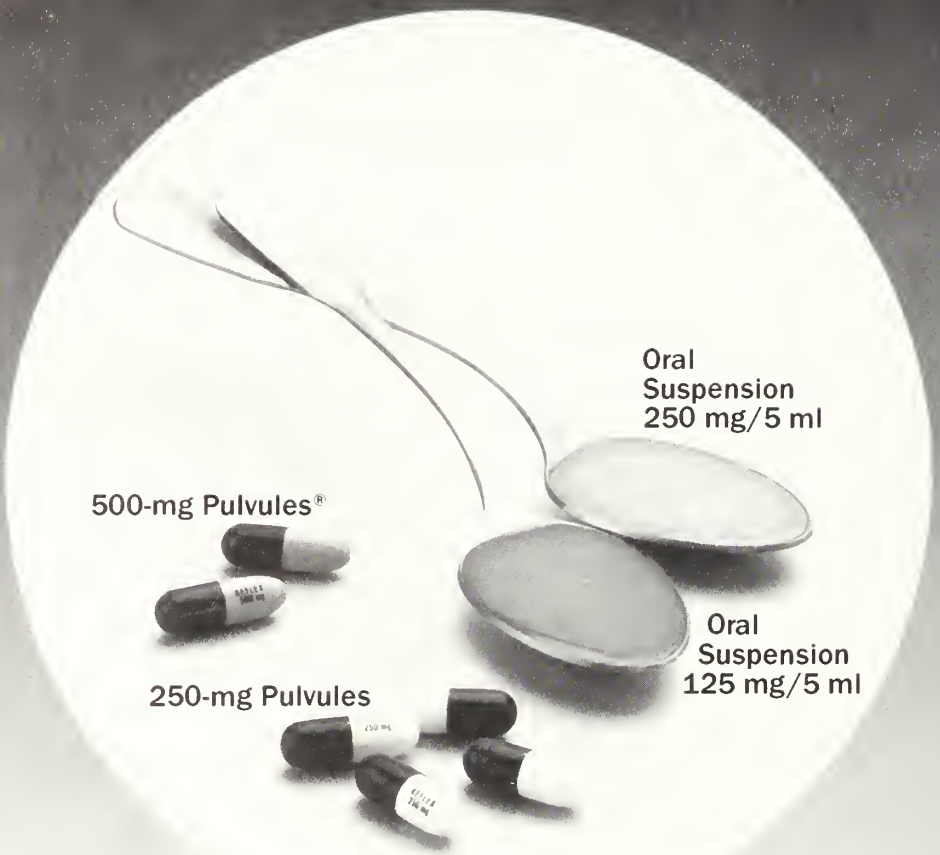
Summary

We have shown that thoracoscopy may have application in the treatment of empyema. Thoracoscopy may provide an intermediate therapeutic option in those situations where closed thoracostomy is inadequate and open debridement is contemplated. With this approach, pleural adhesions can be broken down with adequate drainage being observed.

REFERENCES

1. Jacobaeus HC: Uber die Moglichkeit die Zystokpie bei Untersuchung Serosee Hohlungen Anzuwenden. *Munchener Medizinische Wochenserhift*, 57:2090-2092, 1910.
2. Jacobaeus HC: The practical importance of thoracoscopy to surgery of the chest. *Surg Gynecol Obstet*, 34:289-296, 1922.
3. Weisburg D, Kaufman J: Diagnostic and therapeutic pleuroscopic: Experience with 127 patients. *Chest*, 78:732-735, 1980.
4. Oakes DD, Sherck JP, Bradsky JB, Mark JBD: Therapeutic thoracoscopy. *J Thorac Cardiovasc Surg*, 87:269-273, 1984.
5. Jones JW, Kitanama A, Webb WR, McSwain N: Emergency thoracoscopy: A logical approach to chest trauma management. *J Trauma* 21:280-284, 1981.
6. Mavroudis C, Symmonds JS, Minagi H, Thomas AN: Improved survival in management of empyema thoracis. *J Thorac Cardiovasc Surg*, 82:49-57, 1981.

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Hypothyroidism Induced Amenorrhea-Galactorrhea

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THE PATIENT WAS A 27-year-old gravida 1, para 1, white school teacher who was referred for evaluation on 7-25-84. The patient reported that during the summer of 1982 she became amenorrheic. It persisted and on 4-7-83 she sought medical advice. At that time, she was seen and evaluated by her gynecologist, and galactorrhea was noted on his examination. A random serum prolactin level drawn on that date was elevated at 135 ng./ml. (normal range 0-25 ng./ml.) and subsequent skull films were normal. The patient was instructed that her amenorrhea was probably secondary to the elevation of her serum prolactin level. She had a withdrawal period following administration of Provera. A repeat serum prolactin level was obtained on 4-26-83 and was again elevated at 122 ng./ml..

The patient had no further spontaneous menses and she failed to have a withdrawal bleed following Provera in September 1983. The absence of withdrawal bleeding prompted her to re-seek medical advice. Re-examination in September 1983 revealed an enlarged uterus consistent with a 16-week gestation and her pregnancy test was positive. Her remaining pregnancy was unremarkable and she delivered a normal son in February 1984. Post partum she remained amenorrheic. On her initial post partum visit, a palpable thyroid abnormality was first noted and she was referred for internal medicine evaluation.

During her third trimester of pregnancy a repeat serum prolactin level was elevated at 477 ng./ml. (third trimester normal is 400 ng./ml.). Post partum her galactorrhea resolved spontaneously.

The patient neither smoked nor consumed ethanol. At the time of the evaluation, she was taking no medications. There was no history of chest or head trauma and no history of goiter. She had noted some increase in fatigue following the birth of her son, but no change in voice, cold intolerance or headache. A sister was said to have a goiter.

On examination, her pulse was 48, temperature 97.4°, blood pressure 100/60 and weight 137 pounds. Her thyroid gland was smooth and diffusely enlarged to 2½ times normal. No bruits were audible. No peripheral edema was noted. The cardiopulmonary examination was unremarkable and muscle stretch reflexes appeared normal without lag noted on the relaxation phase. Visual fields were intact to direct confrontation. Laboratory data obtained included a total T4 of 4.16 mcg.% (normal 5-12 mcg.%), a TSH of 9.57 (normal 0.2-5.6) and a radioactive iodine uptake was low (4% at two hours and 14% at 24 hours).

Primary hypothyroidism was suspected as the underlying etiology and replacement therapy was instituted.

Subsequent Course

The patient was treated with 0.2 mg. of levothyroxine sodium daily. Her amenorrhea resolved. A repeat T4 on 10-16-84 was elevated at 15 mcg.%. Her dose of levothyroxine was subsequently decreased to 0.15 mg. daily. A repeat serum prolactin level on 10-15-84 had decreased to 23 ng./ml., repeat TSH was less than 0.2. When last seen in December 1984 she remained well.

Discussion

Galactorrhea and amenorrhea are now well recognized as being associated with hyperprolactinemia. The etiology of hyperprolactinemia can be varied and is not always associated with a pituitary adenoma.[1] This was demonstrated in this case.

The patient had been followed for amenorrhea and galactorrhea and was presumed anovulatory. Her pregnancy was only discovered when she failed to withdrawal bleed from a second course of Provera. Fluctuations in the prolactin level and its effect upon ovulation do occur, and this was demonstrated by this patient's ability to conceive.

The typical patient with primary hypothyroidism presents with few complaints but many elicitable symptoms. Classically, menorrhagia is a problem in the chronically hypothyroid patient. In the young patient, a subacute presentation with specific end organ complaint such as recurrent abortion, recurrent prematurity or menometrorrhagia is possible, as was the case in this patient. Even in retrospect, it was difficult to delineate any symptomatology other than the amenorrhea and galactorrhea which could be attributed to hypothyroidism in this patient. The patient's complaint of fatigue, which had its onset after the birth of her child, could have been related to the demands of her recent pregnancy and the rearing of her newborn child.

From the Johnson County Internal Medicine Associates, 1101 W. Jefferson St., Suite E, Franklin, Ind. 46131.

Elevated serum prolactin levels are seen commonly in women with primary hypothyroidism.[2] In Dr. Honbo's study published in 1978, 39% of his patients with hypothyroidism had associated hyperprolactinemia. He demonstrated a direct relationship between the log of the serum TSH and the log of the serum prolactin level in his patient group. This suggested that the elevated prolactin level was the result of an accentuation in TSH excretion, which has been previously demonstrated as being associated with hypothyroidism. Dr. Honbo, however, made reference to other studies in hypothyroid patients in which such a correlation between the level of the serum prolactin and serum TSH was not possible. He also concluded that, though in his study hyperprolactinemia was commonly associated with primary hypothyroidism, complications of that hyperprolactinemia such as galactorrhea and amenorrhea were uncommon.

Hypothalamic hypothyroidism is also recognized as an etiology for amenorrhea, which is not responsive to thyroid hormone replacement.[2] There was no clinical evidence at the time of this patient's presentation to suggest a secondary or tertiary etiology for her hypothyroidism and simultaneous hyperprolactinemia. This was confirmed by the slight elevation of the TSH level. The reversal of the patient's hypoprolactinemia and amenorrhea with thyroid replacement confirmed the suspicion of primary hypothyroidism.

An association between primary hypothyroidism and galactorrhea was first demonstrated by Jackson in 1956.[4] This association remains uncommon and has not been uniformly associated with hyperprolactinemia.[5] The association of amenorrhea with galactorrhea and hypothyroidism has been associated with hyperprolactinemia.[6,7,8]

The etiology of this patient's amenorrhea and galactorrhea was pursued in light of her thyromegaly noted on physical exam. Laboratory data confirmed the presence of primary hypothyroidism. The patient's thyroid uptake study excluded iodine deficiency as an underlying etiology. Hashimoto's thyroiditis was considered a likely etiology.

Summary

A patient with amenorrhea-galactorrhea secondary to primary hypothyroidism is presented. Therapy with supplemental thyroid hormone 1) corrected the low serum thyroxin level, 2) reversed the amenorrhea, 3) corrected the hyperprolactinemia and 4) suppressed the level of thyroid stimulating hormone. Primary hypothyroidism is an unusual etiology for amenorrhea-galactorrhea but should be considered in a differential diagnosis of the patient who presents with amenorrhea and galactorrhea even without other clinical evidence of hypothyroidism.

REFERENCES

1. Honbo KS, Van Herle AT, Kellett KA: Serum prolactin levels in untreated primary hypothyroidism. *American Journal of Medicine*, 64:782-787, 1978.
2. *Internal Medicine*, Editor-In-Chief, Jay H. Stein, M.D. Little, Brown and Co., Copyright 1983, Boston.
3. Woolf P: Hypothyroidism and amenorrhea due to hypothalamic insufficiency. *American Journal of Medicine*, 63:343-346, 1977.
4. Jackson WPU: Post thyroidectomy hypothyroidism, hypoparathyroidism, exophthalmos and galactorrhea with normal menstruation: Metabolic responses to probenecid. *Journal of Clinical Endocrinol Metab*, 16:1245, 1956.
5. Toft AD, Boyns AR, Cole EN, *et al*: The effect of thyrothropin-releasing hormone on plasma prolactin and thyrotrophin levels in primary hypothyroidism. *Clin Endocrinol*, 2:289, 1973.
6. Groff TR, Shulkin BL, Utiger RD, Talbert LM: Amenorrhea-galactorrhea, hyperprolactinemia and suprasellar pituitary enlargement as presenting features of primary hypothyroidism. *Obstetrics and Gynecology*, Vol. 63, #3 Supplement: 86s-89s, 1984.
7. Shahshahani MN, Wong ET: Primary hypothyroidism, amenorrhea, and galactorrhea. *Arch Internal Medicine*, 138:1411-1412, 1978.
8. Onishi T, Miyai K, Aono T, Shioji T, Yamamoto T, Okada Y, Kumahara Y: Primary hypothyroidism and galactorrhea. *American Journal of Medicine*, 63:373-378, 1977.

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Sudden Death Secondary to Anomalous Origin of the Right Pulmonary Artery from the Aorta

TSAU-YUEN HUANG, M.D.
Gary

Abstract

Sudden death of a previously healthy 21-year-old man is reported. Autopsy revealed an anomalous right pulmonary artery originating from the aorta, patent ductus arteriosus, biventricular hypertrophy, and pulmonary hypertensive vascular lesions in both lungs. The embryogenesis and the mechanism of pulmonary hypertension of anomalous origin of a pulmonary artery from the aorta are briefly discussed. Acute cardiac decompensation secondary to pulmonary hypertension resulting from an anomalous right pulmonary artery originating from the aorta is considered to be the cause of sudden death in this case.

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ANOMALOUS ORIGIN of a pulmonary artery from the aorta is a rare congenital cardiovascular malformation. There are approximately 60 cases reported in the world literature.[1] Although few persons with an anomalous pulmonary artery from the aorta have survived up to their twenties,[2,3] most of the others have signs and symptoms of congestive heart failure and pulmonary hypertension and die in early infancy if the malformation is not surgically corrected.[4] The following is a report of sudden death in a previously healthy young man who had anomalous origin of the right pulmonary artery from the aortic arch.

Case Report

A 21-year-old man who had just been released from prison and had walked for 10 to 15 miles on a hot summer day was found dead on the roadside of a highway. There was no medical record available. However, the prison record indicated that he had participated in all activities normally and was apparently in good health during his stay in prison.

Autopsy revealed marked cardiomegaly with biventricular hypertrophy and dilatation. The heart weighed 650 grams. The main pulmonary trunk was slightly dilated. There was a continuation of the main pulmonary trunk to the left pulmonary artery with absence of the right pulmonary artery. A large patent ductus arteriosus of 8 mm in diameter was present at 4 cm distal to the orifice of the pulmonary artery. There were three branches at the aortic arch: left subclavian, left common carotid, innominate, and right pulmonary artery (*Fig. 1*). The coronary arteries were widely patent.

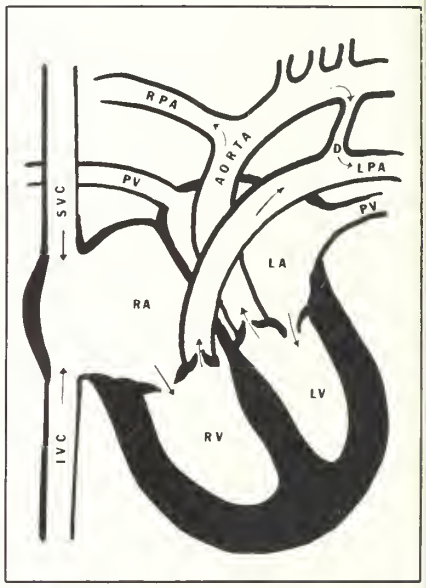


FIGURE 1: Schematic illustration of the right pulmonary artery originating from the aorta and the proposed directions of blood flow (arrows). Explanation of abbreviations: IVC, inferior vena cava; SVC, superior vena cava; LA, left atrium; LV, left ventricle; RA, right atrium; RV, right ventricle; RPA, right pulmonary artery; LPA, left pulmonary artery; PV, pulmonary vein; D, ductus arteriosus.

On opening the heart, there were marked biventricular dilatation and hypertrophy. The valvular circumferences and valvular leaflets were within normal limits.

The wall of the right and the left ventricles each measured 1.8 cm in thickness. The papillary muscles and the trabeculae carneae were markedly hypertrophic, especially in the right ventricle. Atherosclerotic changes characterized by the presence of fatty streaks and fibrous plaques were noted

in the main pulmonary trunk, "right" and left pulmonary arteries (*Fig. 2*). Microscopically, both the right and the left ventricles showed marked myocardial hypertrophy with focal loss of cross striations of the myocardial fibers. The conduction system including SA, AV nodes and bundle branches did not show significant abnormalities.

The lungs were edematous and congested. The right lung weighed 500 grams and the left lung weighed 450 grams. Microscopically, there were medial hypertrophy, intimal fibroelastosis and plexiform lesions in the intrapulmonary muscular arteries and arterioles (*Fig. 3*). There was no difference in the degree and extent of the vascular changes between the right and the left lungs.

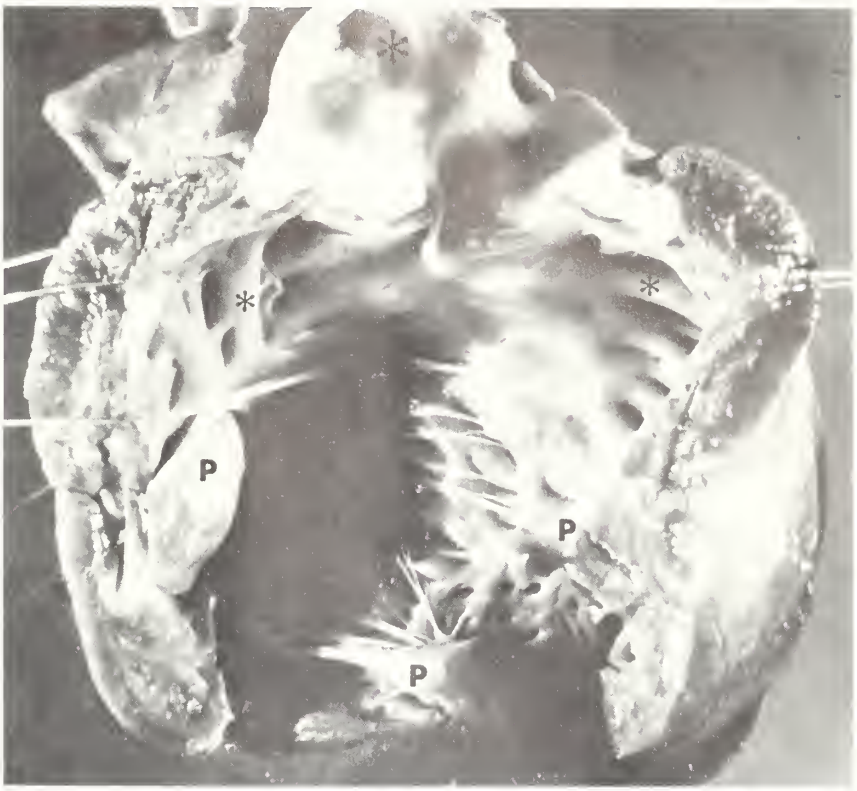


FIGURE 2: Marked hypertrophy and dilatation of the right ventricle, prominent trabeculae carneae (small asterisks), papillary muscle (P), atherosclerotic plaques in the main pulmonary artery and patent ductus arteriosus (large asterisk at top center).



FIGURE 3: Marked intimal fibroelastosis (asterisk) and plexiform lesions (P) characteristic of grade III and IV pulmonary hypertensive vascular lesions (elastic stain, X400).

Discussion

Embryologically, abnormal development of the sixth arch of the aortic sac;[5] malseptation of the truncus arteriosus;[3] or failure of the right pulmonary artery to migrate leftwardly or vice versa,[1] may result in abnormal origin of a pulmonary artery from the aorta. Although either the right or the left pulmonary artery may be involved, anomalous origin of the right pulmonary artery from the aorta is more common than that of the left. Some cases may also have associated cardiovascular anomalies such as patent ductus arteriosus, tetralogy of Fallot, ventricular septal defect, atrial septal defect, aorticopulmonary widow or coarctation of the aorta.[6] In the present case there was an associated patent ductus arteriosus, which is more commonly associated with the anomalous right pulmonary artery, while tetralogy of Fallot is more commonly associated with the anomalous left pulmonary artery.

Histological changes of the intrapulmonary muscular arteries and arterioles are varied and range from normal to marked medial hypertrophy and intimal proliferation.[7] The majority of authors[7,8,9,10] reported no dif-

ference in the right and the left lungs, while others[11,12] indicated more severe medial hypertrophy was seen in the "normal" lung (the lung receiving blood from the pulmonary artery) and intimal hyperplasia in the "abnormal" lung (the lung receiving blood from the aorta). The vascular changes in the present case are grade III to IV according to the criteria of Heath and Edwards,[13] and are considered to be irreversible changes.[14] The presence of fibrous plaques in the main pulmonary artery, both "right" and left pulmonary arteries and marked hypertrophy of the right ventricle are the result of severe pulmonary hypertension.

The exact mechanism of pulmonary hypertension even in the "normal" lung is not known and is thought to be due to neurogenic crossover from the "abnormal" lung; left ventricular failure; or presence of circulating vasoconstrictive substance.[1] The direction of the pulmonary arterial blood flow is proposed as illustrated in *Figure 1*. In this case the blood from the aorta not only flows directly to the "right" pulmonary artery but also indirectly to the left pulmonary artery through a patent ductus arteriosus. Hence, both lungs would be subjected to the same systemic blood pressure and the vascular changes seen in both lungs would be expected to be in the same degree and extent such as seen in this case.

It is interesting to note that a person with grade III to IV pulmonary hypertensive vascular lesions and marked right ventricular hypertrophy could participate in normal activities in prison without obvious symptoms or signs of congestive heart failure. However, sudden cardiopulmonary decompensation and sudden death may occur, especially under severe physical stress.

REFERENCES

1. Penkoske PA, Castañeda AR, Fyler DC, *et al*: Origin of pulmonary artery branch from ascending aorta. Primary surgical repair in infancy. *J Thorac Cardiovasc Surg*, 85:537-545, 1983.
2. Fraentzel, O: Ein Fall von Abnormer Communication der Aorta mit der Arteria Pulmonalis. *Virchows Arch path Anat*, 43:420-426, 1868.
3. Caro C, Lermanda VC, Lyons HA: Aortic origin of the right pulmonary artery. *Brit Heart J*, 19:345-352, 1957.
4. Keane JF, Maltz D, Bernhard WF, *et al*: Anomalous origin of one pulmonary artery from the ascending aorta. Diagnostic, physiological and surgical considerations. *Circulation*, 50:588-594, 1974.
5. Ambrus G: Congenital absence of the right pulmonary artery with bleeding into the right lung. *J Tech Meth*, 15:103-109, 1936.
6. Pool PE, Vogel JHK, Blount SG Jr: Congenital unilateral absence of a pulmonary artery. The importance of flow in pulmonary hypertension. *Am J Cardiol*, 10:706-732, 1962.
7. Griffiths SP, Levine OR, Anderson DH: Aortic origin of the right pulmonary artery. *Circulation*, 25:73-84, 1962.
8. Porter DD, Canent RV, Jr, Spach MS, *et al*: Origin of the right pulmonary artery from the ascending aorta. Unusual cineangiographic and pathologic findings. *Circulation*, 27:589-593, 1963.
9. Mudd JG, Willman VL, Riben A: Origin of one pulmonary artery from the aorta. *Am Rev Respir Dis*, 89:255-262, 1964.
10. Stanton RE, Durnin RE, Fyler DC, *et al*: Right pulmonary artery originating from ascending aorta. *Am J Dis Child*, 115:403-413, 1968.
11. Wagenvoort CA, Neufeld HN, Birge RF, *et al*: Origin of right pulmonary artery from ascending aorta. *Circulation*, 23:84-90, 1961.
12. Yamaki S, Suzuki Y, Ishizawa E, *et al*: Isolated aortic origin of right pulmonary artery. Report of a case with special reference to pulmonary vascular disease in the left and right lungs. *Chest*, 83:575-578, 1983.
13. Heath D, Edwards JE: The pathology of hypertensive pulmonary vascular disease. *Circulation*, 18:533-547, 1958.
14. Dexter L: Pulmonary vascular disease in acquired and congenital heart disease. *Ann Intern Med*, 139:922-928, 1979.

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The Full Nest Syndrome: A New Cultural Entity

PAUL D. RILEY, M.D.
Indianapolis

When Adult Children Move Back into the Home, They May Assume Their Previous Child or Adolescent Roles, Which Puts Great Stress upon the Family . . .

The author is Medical Director, St. Vincent Stress Center, 8401 Harcourt Road, Indianapolis, Ind. 46260.

A NEW CULTURAL ENTITY is being observed with resultant consequences when adult children return to their parents' home. The following case report demonstrates symptoms which may occur.

There was an old woman who lived in a shoe. She had so many children she didn't know what to do. She gave them broth without any bread and spanked them all soundly and sent them to bed . . . and she got depressed.

Mrs. N. was a 56-year-old woman admitted to the hospital with weight loss, increased anxiety, inability to concentrate, insomnia, psychomotor agitation, loss of energy, feelings of worthlessness and guilt and suicidal ideation. Although the patient had been depressed for approximately two years, the precipitating episode occurred when she drove to a local lake, sat in the car and attempted to build up her courage to commit suicide. Fortunately, she was arrested because she was in the park after hours, and her husband was called to the police station.

Shortly after admission, the patient was able to relate her story and her concerns about her life situation. Although she had been a much involved mother of her three children during their infancy, she looked forward to the time when she and her husband would have privacy and enjoy visitation from children and grandchildren. She regretted that life had not turned out as she had imagined, and her life was chaotic and filled with much stress. Some five years prior to the admission, when her youngest daughter had entered college, her oldest son had returned home to live. Within six months, he was followed by his sister some three years his junior who gave up her apartment and moved back home. Apparently, after two years of college, the youngest daughter decided to return home, seek a job in the local community and give up her college career. Therefore, in a short period of time, just when Mrs. N. was expecting relief from childrearing, three adult children moved back within the home.

The case was more complicated when the 30-year-old son continued in his adolescent-type behavior by leaving clothes on the floor, using the living room for entertaining friends, staying out late hours and demanding that his mother continue in the preparation of meals at odd times. The second daughter seemed to be of no great stress other than the mother worried about the daughter's lack of social involvements and her desires to stay at home. Already at 27, she had given up dating and decided that she would never marry but would remain within the protection of the home situation. She also had a series of jobs moving from one position to another and discussed her inabilities to maintain a steady job with the mother. The last child, age 22, seemed to have difficulties with careers and frequently complained bitterly about her jobs.

Mrs. N.'s husband was not sympathetic for her cause and could not understand why she would not want the children at home because they gave great joy to the family. He perceived that the work of the mother was to fix meals (even at odd times), to clean up after the children and to be a confidant. He seemed to decrease Mrs. N.'s self-esteem by stating that if the children were outside of the home, they may be involved in accidents or conflicts which would affect their lives not only now

but for their entire future. Indeed, for him it was much safer for the children to be at home. This led to worsening in the marriage relationship.

Mrs. N. recovered remarkably when in the hospital. She saw herself as accepting new and different tasks. She enjoyed Rehabilitation Therapy and began a number of new hobbies. Within a week, her depression seemingly was gone and she was feeling much better about the whole situation. She confronted her husband while in the hospital (much to his surprise) concerning the children being at home. A number of excuses were given on the part of the husband which led to Mrs. N. stating that unless the children left, she would leave and find an apartment in order to have some form of privacy.

Mrs. N. (now aided by her husband) was able to return home and set limits on the children, asking them to take on adult expectations while living there. Further, a limit of time was given to all children except the youngest for when they would have to leave the home and maintain their own apartment. Mrs. N. explained to them that she loved them very dearly; however, after a period of time she felt that they were old enough to take care of themselves.

In further discussions some six months later, Mrs. N. seemed to be a very happy individual, continuing with the new hobbies that she had found, working in social agencies and volunteer work, and looking forward to the time when the last child would leave the home.

Conclusion

In Mrs. N.'s case, as with many parents, there seems to be a time to end childrearing within our culture. When adult children move back into the home, they may assume their previous child or adolescent roles, which puts great stress upon the family. In Mrs. N.'s case, the husband seemed to identify with the enthusiasm of youth with his children, which further weakened the marital relation between husband and wife. With economic changes and increased divorce, adult children living at home may be more common than it was in the past, and may create more stress because of the unexpectancy within the life cycle of events.

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ETHICS AND MEDICINE

3. Do Not Resuscitate: An Outpatient Decision?

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TIMOTHY J. STOREY, M.D.
STEPHEN E. OLVEY, M.D.
Indianapolis

HOSPITAL ETHICS Committees (HEC) review cases on request, and in some institutions prospectively monitor certain types of patient-care situations. The HEC concerns itself with identifying and resolving conflicts in patient-care goals or decisions arising out of different systems of values or morals held by the patient, patient's family, or various members of the health care team.[1,2] The decisions are consultative and nonbinding. This report reviews a case that was presented to the Methodist Hospital HEC by the attending physicians.

Case Report

Mr. R, 65 years old, suffered a respiratory arrest at home. An emergency medical team successfully intubated and resuscitated him. He had been on continuous oxygen at home and was bedfast. He suffered from no other serious medical or surgical illnesses. He was hospitalized in the Intensive Care Unit where he remained on a ventilator until his demise, three and one-half months later. He had had many previous hospitalizations, nearly all of which were for treatment of his progressively worsening chronic lung disease. The two admissions that immediately preceded the final one were both due to severe respiratory failure. His treatment had included extended intubation and ventilator support.

During this final hospitalization, Mr. R. was usually conscious and relatively alert, but he refused to communicate. Numerous unsuccessful attempts were made with every reasonable method to wean him from the ventilator. It was the opinion of all who cared for him that he was aware of all communications directed toward him. His wife was certain he remained silent out of frustration and depression because of the "torture" of being on the ventilator. He had told her before the final hospitalization that he wished never again to be placed on a ventilator.

Once it became apparent that he was permanently ventilator-dependent, some of the attending physicians advised that the ventilator be discontinued. The primary care physician did not agree, and the patient remained passive. Even though Mr. R's wife was certain he wanted to die and never wanted to be on the ventilator in the beginning, she would not consent to stopping the life-sustaining treatment. Toward the end of the hospitalization, the patient gradually entered an apparently permanent vegetative state. The family then consented to stopping the ventilator, and he died shortly thereafter.

Discussion

The HEC identified the ethical issues upon which those who opposed continuing ventilator care based their recommendation: 1) The patient had, prior to admission, expressed his desire not to have ventilator care; 2) He was *competent* to give such a request; 3) He had not revoked the earlier request at any time, and he was alert enough to do so if he desired; 4) The fact he had had the condition for some time, and had been previously on ventilator support twice, indicated his request was indeed "informed," and to ignore the patient's valid request violated his right to self-determination (principle of *autonomy*); 5) The patient was not only ventilator-dependent, but his quality of life was very poor, and not improving; to keep him in this state of prolonged dying, without any hope of improvement, was not in the best interest of the patient (violated the principle, "*do no harm*"); 6) The inappropriate continued use of the ventilator violated the principle of *justice* in terms of good stewardship of resource use.

On the other hand, the ethical issues upon which the primary physician based his decision to continue ventilator care (until the patient entered a permanent vegetative state) were summarized as follows: 1) The patient's prior statements remained unconfirmed, except by the wife, and she was reluctant to agree to discontinuing the ventilator treatment, thus putting into question the validity of the patient's stated wishes prior to admission; it was assumed the patient desired continued complete care, and to not honor that would be to deny him his right of self-determination or *autonomy*; 2) It is wrong to stop life-sustaining treatment (principle of *non-maleficence*) unless the patient appropriately, clearly and competently requests otherwise; 3) The

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issue of *justice*, that is, fair use of resources, is not an issue for the primary physician, as long as the resources are available, and the patient still needs them.

The HEC recognized the merits of the antagonist's position. Nevertheless, the committee proposed that the ethical principle, which overrides all other considerations in this case, is that of *autonomy* (self-rule). The patient and his wife had been adequately informed about the consequences of continuing or discontinuing the ventilator support. To support the right of self-rule, it was concluded that the patient's refusal to participate actively in the decision to stop the ventilator was a definite request to continue ventilator care. It was felt inappropriate to override that decision while the patient was awake and alert.

The committee members agreed, however, that this dilemma could have been avoided, had the patient made a more formal request to his physician prior to this final event, and ideally had put the request in writing that no resuscitative efforts be used. In such a situation, the family (and nursing home personnel, when appropriate) would also agree to honor the informed consent of the patient.

In Minneapolis, an effort to provide terminal outpatients the opportunity to decide against being inappropriately intubated has been successful.[3,4] Nevertheless, it is a problem which must be approached carefully by a compassionate physician with his or her patient.[5]

This case demonstrates the complex legal issues and ethical principles involved in all patient-care (doctor-patient) situations: competence of the patient, informed consent, balancing beneficence with justice, autonomy, identifying and avoiding harm, and many more. It also emphasizes that recognizing such issues as a routine part of patient management will enhance all aspects of health care, and will help to avoid the common tragedy illustrated in this case.

REFERENCES

1. Schmidt PE, Mullin SJ: Ethics and Medicine: I. Introduction. *Indiana Medicine*, 78(5):403-404, 1985.
2. Olvey SE: Ethics and Medicine: II. The Hospital Medical Ethics Committee. *Indiana Medicine*, 78(6):516-517, 1985.
3. Miles SH, Crimmins TJ: Orders to limit emergency treatment for an ambulance service in a large metropolitan area. *JAMA*, 254(4):525-527, 1985.
4. Haynes BE, Niemann JT: Editorial. Letting go: DNR orders in pre-hospital care. *JAMA*, 254(4):532-533, 1985.
5. Jackson DL, Younger S: Patient autonomy and death with dignity: Some clinical caveats. *N Engl J Med*, 301:404-408, 1979.

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The Diabetes Research and Training Center, Indiana University School of Medicine, is seeking patients for studies with an experimental aldose reductase inhibitor to determine if this drug will prevent or retard the development of diabetic retinopathy. Aldose reductase inhibitors work by preventing the accumulation of sorbital in tissues including the lens, nerves and retina. They have already been found to prevent metabolic cataracts and to improve diabetic neuropathy in experimental trials. Since the retinal cells accumulate sorbital, this trial is designed to determine if the administration of the drug would prevent retinopathy or retard its progress. The drug is experimental and although no serious side effects have been found, this study will require close follow-up for one to two years. The potential benefit for patients would be close follow-up of their diabetes and retinopathy including retinal photographs and the possible prevention of a serious and disabling complication of diabetes. The trial is in a double-blind format. Otherwise healthy patients with either type I (juvenile) or type II (adult) diabetes are being sought. Patients either without retinopathy or with non-proliferative retinopathy would qualify. Patient referral may be made by calling or having the patients call the Diabetes Center at (317) 630-6374.

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Marie Wolff, 79, demonstrates a forward roll in a physical education class at the Van Buren Elementary School in Nashville, Ind. Mrs. Wolff and her husband, George, 81, appeared in the second episode of "Healthy, Happy and Wise," which concerns fitness.

As our population continues to grow older, our society is placing increased emphasis on the concerns of the elderly. The medical profession especially feels the impact of our aging population base. Older patients have special needs and special problems. Just as physicians do, the elderly must deal not only with changes in the delivery of health care, but with DRGs, Medicare and Medicaid. All of these changes can be confusing to older persons who often must base their health care decisions on financial constraints.

It was for these reasons that the Indiana State Medical Association Board of Trustees decided to underwrite "Healthy, Happy and Wise," a six-part public television series for senior citizens, produced by Custom Video of Fort Wayne and Indianapolis. The comprehensive public education program complements the goal set by Dr. Lawrence E. Allen, ISMA president, to develop a liasion with senior citizens through the Indiana Federation of Older Hoosiers.

"Healthy, Happy and Wise" includes not only six half-hour television shows, but news inserts, radio and television public service announcements, free brochures and a physician speakers' bureau for senior citizen groups.

Its goal is to assist seniors in becoming educated health care consumers and more aware of the importance of good health. It also illustrates how doctors are seniors' advocates.

Topics covered in the series include diet and exercise, senior stress, alcoholism, senior adult abuse, medical care options, drug use and misuse, senior support systems, high technology medicine and the quality of a senior adult's life. So as not to offend, "Healthy, Happy and Wise" uses two animated characters to examine some of the myths and realities of aging.

Dr. Robert Swint, a Fort Wayne cardiologist, is host for the series, which also stars real life senior role models. Each of the six programs features two senior citizens who share their stories of positive, productive retirement years. The 12 were selected from more than 175 older Hoosiers who replied to ISMA's statewide "star" search.

From concept to completion, "Healthy, Happy and Wise" took eight months to script, select participants, videotape and air. Scripts were reviewed and edited weekly by Dr.



Mrs. Wolff helps one of her art students in a scene documenting the active senior's enthusiasm for teaching.

Adrian Lanning, chairman of the ISMA Commission on Public Relations; Dr. Randy Lievertz, a member of the PR Commission; Dr. Bill Martz, chairman of the Ad Hoc Committee on Geriatrics, and ISMA public relations staff members. The group gave special attention to topics such as HMOs, IPAs, PPOs, DRGs, Medicare and Medicaid in an effort to clarify some of the confusion that surrounds these subjects. Dr. Swint, who volunteered his time, worked in shooting schedules around his busy medical practice.

To create media interest in the pro-



Dr. Swint

gram, local media were invited to attend each on-location taping. This resulted in numerous newspaper articles, television and radio coverage. In the weeks before the programs actually aired, ISMA held premieres in cities where the various "stars" live. This provided an opportunity for more publicity about the program's air date and time. Posters promoting the programs were sent to all member-physicians whose practices include geriatrics patients; all senior citizen centers, all nutrition centers, and various drug store chains.

PBS stations in Indianapolis, Fort Wayne and Muncie began airing the series in August and early September. Stations in Vincennes-Terre Haute, Bloomington, Evansville, South Bend and Louisville are completing their six-week broadcast schedule this month. WYCC Chicago is considering running the program in December or January.



Bill and Ella Mae Hollowell of Seymour have learned to overcome some very serious health problems with the help of their doctor and with the proper use of drugs. They were featured in the fourth episode of "Healthy, Happy and Wise," which deals with drug use and misuse.

Early audience response to the programs has been positive. The first program, premiered for members of the Indiana Federation of Older Hoosiers, brought not only praise for ISMA, but requests to use the tapes for their organization's programming. Both nursing and retirement homes have requested physician-speakers to show a tape and follow it up with a question-and-answer session. The Indiana Department on Aging and Community Service has also shown interest in the series and helped to promote it last month during the Governor's Conference on Aging.

Requests for brochures indicate seniors are especially concerned about stress and how to overcome it; a sign "Healthy, Happy and Wise" was on target in recognizing seniors need for help in dealing with the problem.

To get maximum impact and extend the public education program over a longer time, a mini-series was developed for commercial stations' news broadcasts. The mini-series features ISMA member-physicians and focuses on some of the same topics as the 30-minute series, but uses a news format. At this writing, the mini-series is expected to begin airing in November.

While many seniors have had an opportunity to view the "Healthy, Happy and Wise" series and the mini-series in their own homes, many more will be able to view it through ISMA and their local county medical society. The shows are available to county medical society physician-speakers' bureaus. Combined with a question-and-answer session, a video-taped episode provides an interesting hour-long program for senior citizen groups. These kinds of public education forums can improve communications between physicians and senior citizens.

"Healthy, Happy and Wise" is a vehicle for physicians to help their patients understand the many changes taking place in medicine today. It has great potential, but only if it is used. Contact the ISMA public relations department for more information about available programs and brochures.

Future Payment Mechanisms for Hospitals and Physicians

HYSTERIA ABOUT HIGH health-care costs—and hospital costs in particular—has reached epidemic proportions. And while it would be foolhardy to say that this is no longer a serious national issue, it is possible to state that there is good news about the costs that Americans are paying to stay in and be treated by hospitals.

It would also be premature to celebrate a complete reversal in the dramatic increases of the 1970s and early '80s, but there is reason to smile.

Some observers believe that the crisis in health care costs has almost passed. However, there is still much work to be done to bring costs under sustained control. But there are indicators of recovery. The prognosis can be excellent. We just have to be judicious about the treatments and procedures we use, so-to-speak.

You might say, "Who is the patient?" The patient is the American hospital industry. It's suffered a long bout with high costs. But it's getting better. As the patient is recovering, keep in mind that its life after the high-fever illness of the 1970s will never be the same. Hospitals, like real patients, are fighting for survival—in the open market.

In an era of cost containment and payment reform, hospitals are learning that the day of the blank check is gone. A balanced budget is now on the national agenda, and is a priority of every hospital Board.

What's this Preventive Medicine that seems to be working so well? It's a combination of things! It's, plain and simple, open-market competition with hospitals as a key participant. And, it seems, the entire nation itself is getting involved. For the first time in history, employers are giving incentives to employees to reduce their health-care costs. The health-care "industry" is, in short, becoming price-conscious.



DONALD F. FOY
Executive Director
Indiana State Medical Assoc.

Unions, business coalitions and voluntary patient groups are also playing their own key roles. State programs are working for their employees, for Medicaid, and for the benefit of all their citizens. And it should be remembered that HMOs, PPOs (Preferred Provider Organizations) and other forms of delivery systems are having a significant impact. By 1995, these alternative systems are projected to capture one-third of the health-care market.

What about Indigent Care? It's a very controversial question, with many controversial answers.

In the old, non-price-conscious, non-competitive days, indigent care was "taken care of" by an elaborate ballet of cost shifting, philanthropy and other circumstances. What often happened was a "hidden subsidization" by private payers. As far as using rate-setting to help the indigent, it won't wash. You shouldn't regulate an entire industry to address a responsibility of society. Besides, the medically disadvantaged deserve a more efficient system too!

With the new era of cost-consciousness, two truths emerge. The new market orientation won't allow such sweeping under the rug. And in the richest and most powerful society in the history of the world—there must be a way to give the indigent the health care they need and deserve. The responsibility to find a solution rests with all of us.

What Lies Ahead for Hospitals?

At the request of Congress, the Health and Human Services Department soon will offer revolutionary proposals to cut Medicare costs, including curbing reimbursements to hospitals for capital outlays and restructuring the way that Medicare pays doctors.

Under the proposals, HHS would increase the basic amount it pays hospitals to treat Medicare patients by 5.5% to 7.5%. But it would eliminate all other Medicare reimbursements to hospitals for their capital costs and returns on shareholders' equity.

Instead, a hospital would receive a single payment that it would apply to all its costs, whether operating or capital expenses. If the additional pay-

Presented at the initial meeting of the Indiana Hospital Medical Staff Section, conducted Sept. 8, 1985, at the Holiday Inn North, Indianapolis.

ment is set at less than 7.5% or is reduced in future years, the hospitals, on average, would receive less than they do under current law.

A hospital's share is determined by the percentage of the hospital's patients who are covered by Medicare; nationally, the percentage is 40%. Medicare also guarantees for-profit hospitals a return (now in excess of 11%) on shareholders equity.

Sen. David F. Durenberger (R-Minn.), chairman of the Senate Finance Subcommittee on Health, and other critics of the present reimbursement system say that its virtually unlimited reimbursement of capital costs has encouraged hospitals to build unneeded facilities and invest excessively.

Michael Bromberg, director of the 1,200-member Federation of American Hospitals, which represents for-profit hospitals, said: "We are vitally interested in the outcome. We fear that if the add-on is set too low or the new system is installed all at once, hospitals that have recently made large capital investments will be unable to cover them with the limited add-on."

Bromberg said the federation does not oppose phasing out the current system under which Medicare reimburses hospitals for the program's share of their capital costs, no matter how large. But he listed some features that his group feels should be included in any new system. "The add-ons should be at least 7.5%, and the transition to the new system (should be) at least 10 years," he said.

The American Hospital Association, which represents both public and for-profit hospitals, wants an even longer transition. Department sources said that, although a final decision has not been made, one top HHS official favors a 7% figure and some think that a figure as low as 4% can be justified. The recommended transition period is likely to be between five and seven years.

What Lies Ahead for Physicians?

As you might surmise, time is ripe for reform. First some background:

In the 10 years ending in fiscal 1983, Medicare spending for physicians' services increased at an annual rate of nearly 20%. By way of contrast, the federal budget grew at an annual rate of just 12.3% — and the Gross National Product at 9.6%.

But last fiscal year (1984), the growth rate in Medicare payments for physicians' services dropped noticeably — and this downtrend is carrying over into this fiscal year. In fact, the annual rate of increase last year was under half that of the previous 10.

No doubt most physicians are familiar with the 15-month freeze on Medicare physician fees. Beginning in July 1984, a freeze was imposed, as part of the Deficit Reduction Act of 1984, on the customary and prevailing charges of physicians who signed participation agreements with Medicare and the actual charges of those who did not enter into this agreement.

As you know, the Administration is seeking a one-year continuation of this fee freeze until Oct. 1, 1986, in order to continue to restrain Medicare reimbursement until long-term reform of this program is put into place, and to help reduce the Federal deficit.

Medicare outlays will come to about $75 billion this year: $51 billion for Part A services; and $24 billion for Part B services. Of that $24 billion, three-fourths — $18 billion — is part of the federal deficit since contributions pay just 25% of the total cost of Part B services. Furthermore, Medicare Part B services will be paying $3 million an hour this year out of the $8.5 million an hour being spent by the program overall.

Many state, county and specialty society staff are receiving calls from their members concerning the current status of Congressional actions on the Medicare fee freeze as physicians attempt to decide whether they should become or continue to be a "participating" physician or to rescind prior agreements effective Oct. 1, 1985. The difficulty of making that decision is compounded by the fact that only two of three Congressional committees with jurisdiction over Medicare Part B have reported reconciliation measures, that both of these measures recommend differing approaches, and that Congress did not reconvene from its August recess until Sept. 4.

It is very likely that the House and Senate will adopt varying proposals on Medicare physician reimbursement. Thus, the ultimate decision probably will have to be made in conference and subsequently approved by both houses.

The AMA tried unsuccessfully to have the freeze on charges of "non-participating" physicians removed in both the Ways and Means and Energy and Commerce Committees. Efforts aimed at ensuring fair and equitable treatment of physicians who choose not to sign participation agreements will continue during the remainder of Congress' actions on Medicare reimbursement.

The Department of HHS recognizes that fee freezes alone will not contain outlays for physician services. They know that the volume of those services must be continued as well. This calls for reform of the present system of physician reimbursement under Medicare.

The law that created prospective payment called for a study of the feasibility and desirability of using DRGs to pay for inpatient physician care; as you may recall, that report to Congress was due this July (1985).

Revising the way that Medicare pays physicians could take several forms, and at least three major options are being studied.

At present, each physician receives a payment every time he treats a Medicare patient, based on his billed charges, his customary charges or the prevailing fee for physicians in that area. As a result, some physicians get substantially more than others in the same locality or in other regions of the country.

In conducting this study, HCFA felt from the start that to examine only a DRG-based payment system for physicians would be too limiting. A DRG system might be feasible but would

such a system be advisable? So HCFA decided early on to examine other payment reforms as well, such as a new fee schedule based on some kind of Relative Value Scale, and a capitation payment system of some kind.

No matter what action Congress may take after it gets HCFA's report, the time constraints are such that nothing new could be put into place before October of 1986. This is why the Department's top priority now is to have the compromise fee freeze measure enacted.

As mentioned earlier, HCFA feels very strongly about the need to constrain the volume or intensity of services. One way to deal with this problem is to pay for a "package" or bundle of physician services, instead of item by item. There are various ways to package-pay: by an ipisode of illness, including inpatient and outpatient care; by a siege of hospitalization; or by a capitation plan.

These package approaches all achieve the same result: They force physicians, in their own economic interest, to practice cost-effective medicine. According to HCFA, physicians have no such incentive now because itemized billing exacts no out-of-pocket penalties if needless or marginal services are performed. Package payment changes this. It pays the attending physician so much and no more, so every extraneous service means money out of pocket.

The concepts for physician reimbursement reform are similar to HCFA's hospital payment reform: they are prospective in nature; they pay for a cluster of services promoting less utilization; and they are risk-reward in nature, bringing about changes in behavior and decision-making.

There are different ways to make a package payment to physicians: One is to offer package deals for certain kinds of surgery, as several hospitals in Minnesota's twin cities do; another is through DRGs for physician inpatient hospital care; HMOs and similar plans buy a package of total care, one year at a time, at a predetermined rate; fixed-rate preferred provider plans that some of the Blues are marketing now achieve the same effect.

Capitation

The ultimate package payment for HCFA is a capitation system. It is looking at one now as part of its study for Congress. It envisions Medicare buying its standard benefit package for a negotiated sum from an insurance carrier or another entity in a geographic area. This sum would cover all beneficiaries in that area—and put the insurance carrier or other entity at financial risk. The carrier would cover either Part B services only, or a combination of Part A and Part B.

This global bundling system would reduce incentives to "game" the system. It would also give HFCA more control over Medicare outlays—which it believes it must achieve if it is going to reduce the federal deficit.

Geographic capitation might have a special appeal to physicians, too, since they could be paid on a fee-for-service basis under this arrangement—and that's what most of us prefer. However, some entity would be at risk and would probably want to have some strong volume controls to curb over-utilization of services.

PPS for Inpatient Services

Paying physicians prospectively for inpatient care is somewhat less comprehensive than capitation. Under this approach, only inpatient hospital services would be paid for at a predetermined rate. The physician would receive a single payment for managing a single episode of illness for a hospitalized patient.

At present, the physician is impelled by malpractice pressures to provide every service possible—a pressure that the AMA says adds anywhere from $15 billion to $40 billion a year in extra health care costs.

There are other reasons why policymakers feel impelled to consider paying physicians prospectively for inpatient care: One is that the unit of payment—a siege of illness in the hospital—is easily and objectively defined—and that would satisfy the need to ensure public accountability for Medicare; another is that a casemix system to base this approach upon has already been developed—Diagnosis Related Groups; finally, this approach would more closely align the economic interests of the physician with those of the hospital. This would answer the criticism that paying hospitals prospectively won't achieve cost-effectiveness because physicians aren't affected by it.

If HCFA does decide to use physician DRGs, the issue then is—Who to pay? Hospitals say they have no interest in handling this. HCFA could pay every physician involved in a case, but that would violate the cluster-payment concept.

Indeed, HCFA apparently feels physician DRG payment is feasible. It appears to correlate as well as hospital DRGs do to the cost of delivering a unit of care.

The issue that remains, therefore, is this: Are physician DRGs advisable? And this must be considered in light of the fact that 64% of the care physicians render is for inpatient care but the remaining 34% is for ambulatory services. So if HCFA adopts a DRG system, how then should it account for both of these?

Under any of these options (whether it be an RVS-based uniform fee schedule, DRG reimbursement or a geographic capitation payment system), the government may lower payments to physicians by raising fee schedules only slightly each year, perhaps less than enough to keep up with inflation. There is a good chance that the final recommendation will impose the first option temporarily, a uniform fee schedule, in order to allow the two more radical options to be tested on a limited basis.

As you know, the AMA opposes most of the proposals being considered. In fact, the House of Delegates recently adopted a statement opposing "any type of national mandatory fee schedule."

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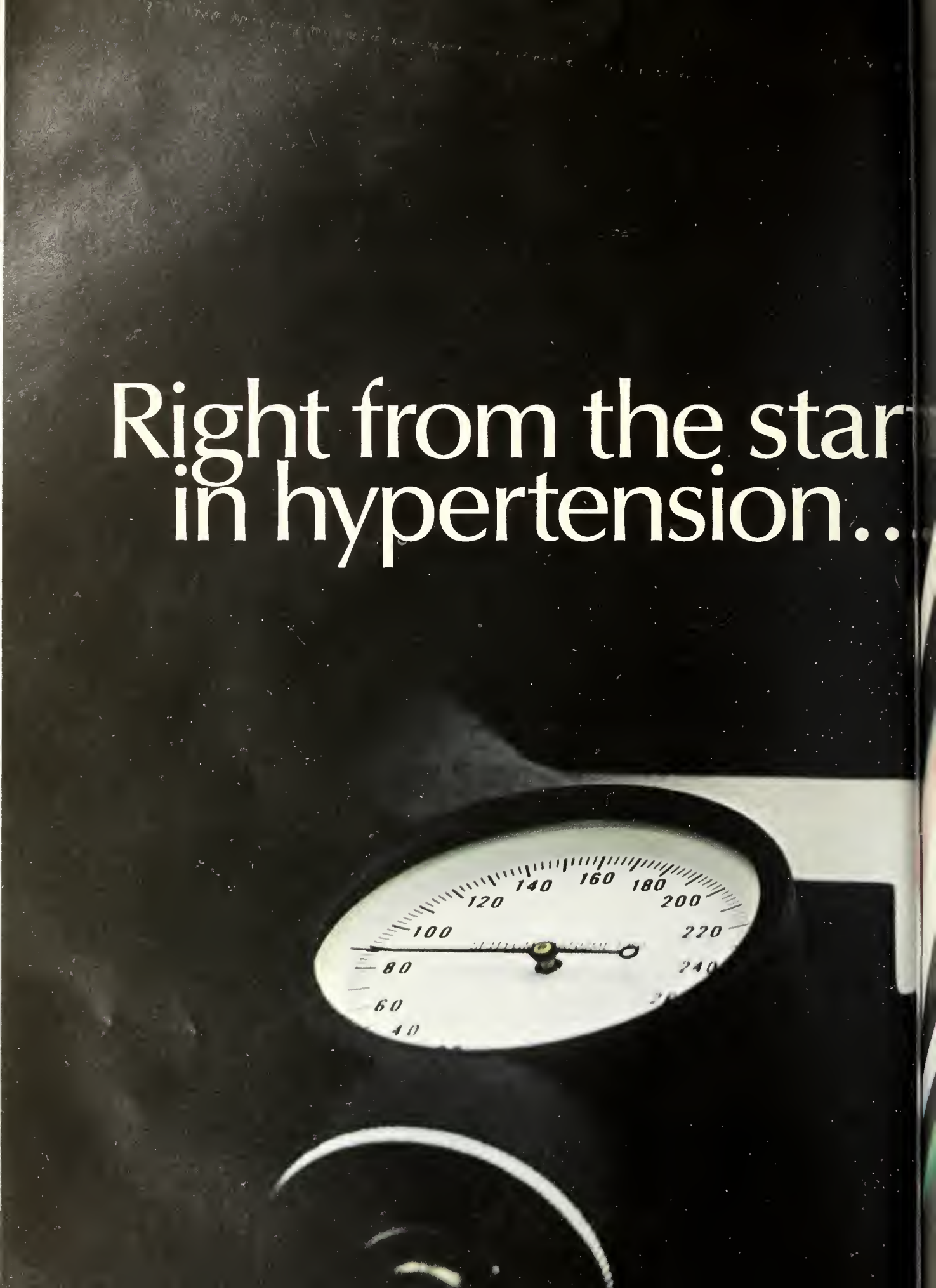
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Once-daily INDERAL LA (propranolol HCl) for smooth blood pressure control without the potassium problems of diuretics

Once-daily INDERAL LA (propranolol HCl) avoids the risk of diuretic-induced ECG abnormalities due to hypokalemia.[1,2] In addition, INDERAL LA preserves potassium balance without additive agents or supplements while providing simple, well-tolerated therapy with broad cardiovascular benefits.

Once-daily INDERAL LA for the cardiovascular benefits of the world's leading beta blocker

Simply start with 80 mg once daily. Dosage may be increased to 120 mg to 160 mg once daily as needed to achieve additional control.

Like conventional INDERAL tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, heart block greater than first degree, and bronchial asthma.

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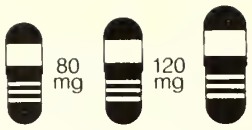


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Please see brief summary of prescribing information on the next page for further details.

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BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective beta-adrenergic receptor blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg for mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for refitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

The mechanism of the antihypertensive effect of INDERAL has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. INDERAL has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, INDERAL also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of sympathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension, it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely; or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY. The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e.g., dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA. Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS. Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. *General.* Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

Clinical Laboratory Tests. Elevated blood urea levels in patients with severe heart disease; elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS. Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility. Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

Pregnancy. Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular. bradycardia, congestive heart failure, intensification of AV block, hypotension, paresthesia of hands, thrombocytopenic purpura, arterial insufficiency, usually of the Raynaud type.

Central Nervous System. lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation to time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal. nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic. pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory. bronchospasm.

Hematologic. agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune. In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous. alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL tablets to INDERAL LA capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg for mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three to seven day intervals until optimum response is obtained. Although individual patients may respond at any dosage level, the average optimum dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximum dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

REFERENCES

1. Holland OB, Nixon JV, Kuhnert L: Diuretic-induced ventricular ectopic activity. *Am J Med* 1981;70:762-768. **2.** Holme I, Helgeland A, Hjermann I, et al: Treatment of mild hypertension with diuretics. The importance of ECG abnormalities in the Oslo study and in MRFIT. *JAMA* 1984;251:1298-1299.

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Memory Lingers on a Chance Meeting

Retired Physician Recalls a Day in Sicily 42 Years Ago

HAROLD E. STADLER, M.D.
Indianapolis

I AM GRATEFUL to the U.S. Army command which ordered me to the Walter Reed Medical Center for the months of January and February, 1943. The course was in tropical medicine under the direction of an octogenarian recalled from retirement, Col. Richard P. Strong, M.D. His knowledge of all branches of medicine, paratitology, and entomology was beyond description and a more impressive medical mind never crossed my path. He lectured for hours without benefit of a single note.

Four months later I was outside Oran awaiting assignment. This came quickly enough and to the 18th Combat Team, 1st Infantry Division. First there were a few days on an LCI (landing craft infantry) with little to do as the massive armada organized for an invasion. The weather became unsettled and our ship manifested all of the movement possible for a cork bobbing on rough water. The captain and I suffered no ill effects but every enlisted man on board paid the price with a loss of gastric contents.

The weather cleared and plans became apparent. The British 8th Army under General Montgomery and the U.S. 7th Army under General Patton invaded Sicily on July 10. General Alexander was to direct the combined forces. Our group entered at Gela. The heat was intense, water supplies scant and the incidence of diarrhea very high. Resistance was light at first, then stiffened as German units were encountered.



Dr. Bill Thatcher (right) with a 12-year-old patient and the boy's parents (Sicily—1943).

On the eighth day I was asked to report to a surgical unit stationed about two miles away. My only equipment was a 35mm camera. I was amazed on meeting the commander of the group who proved to be Dr. "Bill" Thatcher who had been a member of the surgical staff when I was a medical student at the University of Iowa. His patient was a 12-year-old boy who had developed insidious abdominal swelling without fever or jaundice. A surprising amount of equipment was present so sternal bone marrow smear was obtained and stained. Leishmania donovani were apparent, establishing the diagnosis of infantile kala-azar.

The record of my involvement in tropical medicine accompanied me overseas I am sure, but the chance meeting with Dr. Thatcher still continues to amaze me.

Study Examines Economic Growth of Health Sciences and Technology in Indiana

MARTIN T. BADGER
Managing Editor

THE INDIANAPOLIS Economic Development Corp. (IEDC) has published its study entitled "Health Sciences and Technology: A Window of Opportunity for Economic Development in Indiana."

The 85-page report was compiled by a special advisory committee co-chaired by the dean of the Indiana University School of Medicine, Dr. Walter Daly, and the former dean, Dr. Steven Beering, now president of Purdue University. The committee was composed of 20 health-science professionals representing physicians, educational institutions, trade associations, manufacturers and research scientists.

The study itself was undertaken because only recently has health and medicine been recognized as a business and significant growth industry. Going hand-in-hand with the giant strides in the development of medical technology and instrumentation in recent years, of course, have been higher health costs.

But because other community, corporate and governmental watchdogs are constantly examining the case of rising health care costs, the IEDC committee did not explore that question beyond already known statistics. Instead, it sought to address the questions of what resources Indiana does have, are Hoosiers telling their story effectively outside the state, and are they encouraging and developing their market share of the growing health and medical industry?

To survey the field of health sciences and technology, the advisory committee developed a questionnaire and conducted interviews. Data and information were solicited from the Indiana Dept. of Commerce, I.U. School of Medicine, Indiana/Purdue University at Indianapolis, Indiana State Board of Health, Eli Lilly and Company and the I.U. School of Business.

The feasibility of each of the potential proposals was studied and subjected to review by the advisory committee. The results comprise the report, which was released in August. A summary of the highlights of the report follows.

Health Care: A Major Growth Industry

Between 1970 and 1982 per capita expenditure for health care of all kinds, public and private, increased from $358 to $1,365. Health care costs have consistently grown faster than the cost of living during the last decade. The greatest increases have occurred in hospital and nursing home care, while the costs of drugs and drug sundries have remained relatively stable in terms of purchasing power.

Although costs have risen substantially, people are living longer and their overall health is better. Since the 1900s Americans have added more than 27 years in life expectancy, seen a dramatic decline in infant mortality and dramatically increased life expectancy for those over 65. The resulting increased demand for health care has led to increased health expenditures, both in Indiana and nationally. Moreover, as a recognized leader in the field, America's health care technology explosion is of great interest to foreign providers; in fact, foreign interest in health care products exceeds that of any other item offered by Indiana manufacturers.

Identifiable National Trends

In its general research, the committee found several identifiable national trends. Among them:

- Physical fitness is an overwhelming national concern. In fact, about half of American citizens now participate in some kind of exercise or sports program. The use of health spas, YMCAs, health clubs and other recreational facilities is up. The production of sports-related clothing and equipment has become a growth industry.

Indiana has already staked its claim to leadership in the physical fitness field through its efforts to become the amateur sports capital of the U.S.

- The individual's responsibility for his own health is being promoted by various establishments and institutions with a proliferation of health education and health promotion concepts. Underscored are such health hazards as smoking, alcohol abuse, obesity and traffic injuries; moderate exercise and periodic check-ups for such disorders as high blood pressure and certain cancers are emphasized.
- Ethical questions in the health sciences continue to surface—the "right to die" movement, financing of hospice care, recombinant DNA technology for cloning, gene banks, artificial hearts, etc. Moreover, the actual goal of medical practice is being debated. Should the goal be the elimination of death or the pursuit of health?
- Meanwhile, state and federal government and business communities are debating the question of how to

reduce the rate of increase in hospital costs. It is clear there will be pressure to reduce the number of hospital beds in use in the United States. Therefore, mergers, closings or changes in mission can be expected. Complicating this picture is growth of alternative for-profit and not-for-profit health care providers delivering specialized services, usually at a lower price.

• A shift in the population is taking place. The maximum lifespan continues to increase. The "graying of America" will demand an increase in treatment and care of conditions associated with aging.

• Another trend stimulated by high hospital costs and the need to be more responsive to consumer preferences is the increased amount of treatment performed on an outpatient basis.

Existing Assets and Resources

Where does Indiana fit into the picture so far? In other words, what resources does the state have and how can they best be utilized to further enhance its participation in health/science activity? It would seem the facts speak for themselves:

• The Indiana University Medical Center is the second largest of its type in the United States. Its six hospitals offer 2,300 beds, with 60,000 patients admitted each year and 550,000 treated as outpatients. The Medical Center, which occupies 140 acres in downtown Indianapolis, employs 3,700 people.

• Another 23,500 people are employed by the more than 124 Indiana companies that manufacture medically related supplies, products and pharmaceuticals, provide management services or sell specific services to the health care industry.

A total of more than 216,000 Hoosiers are employed in fields related to the health sciences.

• There are 114 general acute care hospitals in Indiana, offering 24,307 beds and employing 80,000 full-time personnel. In addition, the state has 11 hospitals for the mentally ill and 20 special purpose hospitals. Twenty-two hospitals offer accredited residency programs, and five offer approved nursing programs.

• Currently, Indiana has 57,570 nursing home beds operated by 542 licensed providers. These figures represent about 77 beds per 1,000 citizens over the age of 65.

• Basic and developmental research is carried on extensively by both the private and public sector in Indiana. But Indiana received only 8% ($31.1 million) of its medical research funds from federal grants in 1982. This was at a time when the national distribution pattern for such grants was 54%. The major portion of government expenditures in health and medicine are made through the National Institutes of Health; Indiana received only 1% of these funds in 1982.

The I.U. Medical Center is the major recipient of government funds in Indiana. Its major areas of research are cardiology, biotechnology, cancer, ultrasound and medical imaging. Qther major research centers in the state include Methodist Hospital in Indianapolis, the Indianapolis Center for Advanced Research (ultrasound), Purdue University, Indiana State University (recombinant DNA technology, cancer), and Ball State University (sports medicine). In addition, more than 35 R&D activities are carried out by private organizations.

Recommendations for Image Development

The committee concluded that no matter how accomplished or progressive people or manufacturers are, such accomplishments will go unnoticed unless efforts are made to "tell our story." A summary of their key points follows:

1. **Public Relations.** In the medical community in general, image building through publicity seems to be a sensitive area. But since attention often evolves around individual personalities and individual companies that have gained reputations in a particular field, it is felt that acknowledging those responsible and their accomplishments could greatly enhance a community's pride in itself, satisfaction with services available, and project an image of concern and accomplishment to the rest of the country.

2. **Medical Meetings.** To attract national medical conventions to Indiana, a recently established committee chaired by the dean of the I.U. School of Medicine and composed of state health and medical organization representatives should become a valuable resource to the Indianapolis Convention & Visitors Bureau. More attention should also be directed at attracting regional meetings and subgroups.

3. **Promotional Material.** A valuable tool for marketing the state's health and medicine image would be a color brochure depicting the activities of the private business sector, public health providers, government incentives and educational support.

4. **Conference Center.** An estimated 20,000 educational medical meetings are held each year in the U.S. Indiana could increase its percentage of meetings hosted if a Conference Center were located near the I.U. Medical Center campus. Certain Indiana philanthropic organizations have agreed to provide $6 million if matched by the university; such matching funds may be available through revenue bonding authority approved by the 1985 General Assembly.

5. **Smokeless Society.** The Surgeon General of the U.S. has offered the challenge of establishing a "smokeless society" by the year 2000. Indiana could provide a model for the U.S. by organizing concerned groups into a concentrated, organized, all encompassing effort to eliminate cigarette smoking in selected cities.

6. **Institute of Medical Ethics.** A multi-disciplinary institute on medical ethics created jointly with IUPUI and Christian Theological Seminary could meet a crucial societal need and bring national attention to Indiana.

7. **National Nutrition Research Center.** Since 1977 the federal govern-

ment has established 13 human nutrition research centers on university campuses. The combined resources of Purdue University's Dept. of Nutrition and the I.U. Medical Center make Indiana an attractive environment for a center of this type. Preliminary steps are now being taken in this direction.

8. Psychiatric Research. The Institute of Psychiatric Research currently under the authority of the I.U. School of Medicine and Larue Carter Hospital under the Dept. of Mental Health need to be combined to create an Indiana Institute of Psychiatric Research. With mental illness the most prevalent illness in America today, this institute would have the potential to make significant contributions to society.

9. Medical Research. Medical research and development activities in both the public and private sector can add significantly to the state's image and reputation. By projecting NIH figures for all categories of R&D it can be assumed that medical research exceeds $100 million a year statewide. Based on Indiana's 2.13% of the national population, it should be possible to project a potential of over $200 million in total government support for R&D. With the state's many commitments to research, the construction of a $34 million clinical research building on the IUPUI campus, and a $17 million commitment for a chemistry building on the I.U.-Bloomington campus, it should be possible to double the amount of R&D activity in Indiana. Another way to enhance research activity in the state would be to solicit joint research projects with private companies within the state on a regular basis.

10. Endowed Chairs. Private sector organizations can be encouraged to partially endow chairs in the health science fields. Endowed chairs provide an incentive to attract persons of international prominence in a given field. Having an acknowledged leader in a given field attracts the brightest students and premium quality faculty members. It brings national prominence to the institution and creates opportunities for exposure through publications and national meetings.

11. Senior Citizen Lifestyle Institute. The North Central Indiana Medical Education Foundation, located in the South Bend/Mishawaka area, recently dedicated 145 acres and $1 million to develop a comprehensive center for the care of the elderly. The proposed national center will include research, education, training and the production of products and services focused on meeting the needs of the aging. Centering on the whole person, the center will deal with all of the issues related to continuing a productive and fulfilling life and preparing for a dignified death.

Economic Development

A recent study conducted by an independent Ohio research firm concluded that Indiana and more particularly Indianapolis provides an ideal setting for the development of industries in the medical surgical instrumentation field. The study gave central Indiana high marks for university support, the health care delivery and support system, the ample pool of scientific, professional and technical people, the low likelihood of labor-management problems, and excellent transportation.

The Economic Analysis Division of the Indiana Dept. of Commerce has concluded that another field with expansion potential and opportunity in Indiana is the manufacture of prosthetic, orthopedic and surgical medical apparatus.

The committee concludes that it is appropriate to concentrate available economic development resources in the above categories.

Business Innovation Centers. The person with an idea may need office space, administrative support and possibly a lab. In addition, most entrepreneurs often need the encouragement and experience of others who are pioneers seeking to make a dream a reality. Such needs can be met in an incubation or innovation center. Such a center for new businesses related to the medical field is the Indianapolis Center for Advanced Research. Its new Medical Instrumentation Development Program (MIDP) coordinates the use of resources currently available in Indiana to develop new instruments in the fields of ultrasound, cardiology and biosensors. If MIDP is successful, it will combine the state's well recognized medical technology with an emerging venture and seed capital industry. In the long term, it is hoped that the MIDP will become the anchor in a Research and Development Park which will be used to attract out-of-state companies and medical investors to Indiana.

Existing Industry. While encouraging the development of new businesses, established health and medicine related companies' needs should not be forgotten. Industry could help them by bringing groups or task forces together to discuss common concerns and interests, to receive information regarding state programs, to express their needs to state and local leaders, to explore economical joint purchasing arrangements, and to be informed of the purposes of the Corporation for Science and Technology as it relates to their businesses.

Implementation

The committee concluded that a coordinating umbrella organization could help to achieve the maximum benefit from the health/medical resources available and to develop their potential for the future.

The committee was especially interested in making use of the opportunity presented by the newly formed Indiana Economic Development Council, a permanent organization composed of public and private sector groups. It is funded by the Indiana General Assembly and by private contributions.

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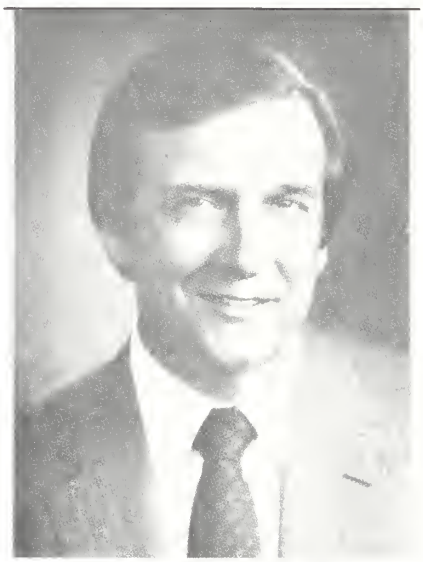
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The ISMA Hospital Medical Staff Section

President Discusses Hospital Bylaws in Welcoming Remarks

AS PRESIDENT of the Indiana State Medical Association, it is my privilege to welcome you to what is to be the first meeting of the ISMA Hospital Medical Staff Section. I am advised that we have representatives with us today from fifty percent of our 120 hospitals throughout the state, with nearly 55 counties represented. I think this is a great beginning.

The proposal for the formation of a Hospital Medical Staff Section for ISMA was adopted by the House of Delegates at our Annual Meeting in 1984. I began work on this project with the dedicated assistance of Beckett Shady-King, ISMA staff assistant. We addressed mailings to the hospital medical staff of each hospital throughout the state and initially requested signatures of endorsement by the medical staff members of each hospital. I am gratified to report that over 2,000 signatures in all were obtained. Our subsequent mailings addressed the purpose of the Hospital Medical Staff Section and encouraged the Executive Committee of each respective hospital to designate representatives to participate in our first meeting as we are today. I also had the opportunity to visit with the Texas Medical Association as they conducted their first meeting of the Hospital Medical Staff Section in their state. I was able to observe the proceedings of that meeting and to obtain many helpful suggestions. I was also provided with a copy of their bylaws, which I brought back for the perusal of the Organizational Committee of our own Hospital Medical Staff Section. This Organizational Committee was appointed and met for the first time in May of this past year. Dr. Robert Holden was selected as the chairman of the Organizational Committee, and this committee has been responsible for preparing the agenda and making the arrangements for this initial meeting of the ISMA Hospital Medical Staff Section. I think this Organizational Committee deserves our sincere appreciation, and I commend them for a job well done.



LAWRENCE E. ALLEN, M.D.
President
Indiana State Medical Assn.

In an era of DRGs for hospitals and Medicare freeze for physicians, it is obvious that medicine is under the most onerous siege by the federal government in the history of American medicine. Even more concerning is the entry of big business into the delivery system of medicine.

An example of this aggressive intrusion into the health care delivery system by large corporations, such as Humana, is the recent acquisition of Clark County Hospital in Jeffersonville. This transaction took place despite the fact that the governing body of the hospital and the hospital medical staff were not in favor of Humana's acquisition of this hospital. Clark County Hospital has been bought and paid for by Humana, and the physicians who traditionally have served in this hospital will be confronted with the necessity of acclimating to the system that will prevail.

Another example of this intrusive entrepreneurism on the part of large corporations is the recent acquisition by Hospital Corporation of America of a controlling portion of stock in the COMED Corporation out of Columbus, Ohio, which manages and has participated in the capitalization of FIRST CARE, an Alternative Delivery System, offered by Marion County as a physician controlled pre-payment plan.

The corporate entrepreneur may be the hospital itself. Examples of this exist in the form of such initiatives as Physicians Alliance, a PPO wherein Methodist Hospital is the major capital investor. Of interest is an article that appeared in the *Indianapolis Star*, September 6, 1985, containing remarks

Presented Sept. 8, 1985, during the first meeting of the ISMA Hospital Medical Staff Section, conducted at the Holiday Inn North, Indianapolis.

by Walter L. Wiseman, president and chief executive officer of American Medical International, Inc., the second largest investor-owned hospital chain in the nation. He stated that he considered Indiana to be a very unique state in terms of creating opportunity for corporate initiatives in the health care market. He further stated that AMI had a very effective relationship with Methodist Hospital in the delivery of home health care services. Further, he stated that AMI was looking forward to expanding such relationships throughout the state by providing health care services, either by way of ownership or by way of affiliation with existing providers.

Certainly in times such as these there is a need for physicians to have a collective bargaining position in the market place of health care delivery. When we survey the activities of hospitals as they seek to integrate into the delivery of medical care for patients within our local communities, there is no way to escape the realization that physicians must react *now* to secure the domain of private practice, as well as the professional rights of hospital based physicians.

Of timely interest is the recent attempt by the Board of Directors of Methodist Hospital in Philadelphia to directly alter the bylaws of its medical staff. Herein lies a very sensitive issue which must be approached with sharp shrewdness on the part of the leadership of each hospital medical staff.

If physicians on any hospital medical staff are to retain the right to determine their own governing body, and the right to construct and amend their own bylaws, they must have an understanding, first of all, as to what their bylaws say. It is important that every physician member of a hospital medical staff read the medical staff bylaws and be accurately familiar with the provisions therein. It is also important that physicians have a background knowledge of what our state law requires of the hospital medical staff and the hospital governing board on the subject of hospital medical staff bylaws.

The language that is found in the statute of most states concerning this issue declares that the hospital medical staff bylaws become effective when approved by the governing body of the hospital, and the language that usually follows this statement stipulates that this approval shall not be unreasonably withheld. Legally interpreted this means that the governing body of the hospital does not have the right to unilaterally amend or write the bylaws for the medical staff.

The provisions that should, and usually will, be found in the bylaws of a hospital medical staff provide for the medical staff to be self-governing, elect its own leaders, construct and amend its own bylaws, and conduct peer review. It is particularly important that the provision for the medical staff to conduct peer review and manage the credentialing process for physicians given privileges within the hospital not be defaulted away by misinformed hospital medical staff leadership. It is also strongly advised that the bylaws provide for the medical staff to have its own legal counsel – not as a means of confronting the hospital administration, but as a means of promoting cooperation with same. This is especially true when we consider the area of joint venturing, and for that matter, any other decision that may mutually affect the hospital and its physicians.

Considering our challenging environment, I am pleased to say that Indiana physicians have before them a very real opportunity to meet these challenges and manage the change that is upon us. Such an opportunity is the initiation of a *Hospital Medical Staff Section* for the Indiana State Medical Association (ISMA-HMSS), which will network representatives from our various hospitals throughout the state in a communicative program designed to allow for bi-directional exchange of information between the hospital medical staff and your state medical association. This will allow for the distribution of resources to individual groups of physicians serving in our hospitals and provide them with specific guidance in dealing with hospital/physician relationships.

The reality of an ISMA-HMSS can effectively offer hospital physicians assistance in marketing services and computer capability, while serving to represent the hospital medical staff in such negotiating efforts as co-venturing with hospitals and the development of health care facilities and the provision of services therein. The HMSS can further help by bringing to hospitals the kind of educational programs that will augment the understanding and management of the future change destined to further affect physician activities in our hospitals. All of this is possible in the current organization of a hospital medical staff section for Indiana physicians.

As you may know, Indiana physicians are not alone in this effort. There are 21 other states in the Federation of the AMA who have preceded us creating an HMSS. I encourage you to secure representation from each of our hospitals throughout the state to strengthen and provide essential participation in this new arena for working out the challenges confronting physicians in our hospitals.

The ISMA-HMSS is the vehicle that will make it possible for physicians to deal with challenge and change. As your president, you have my confidence and best wishes. Thank you.

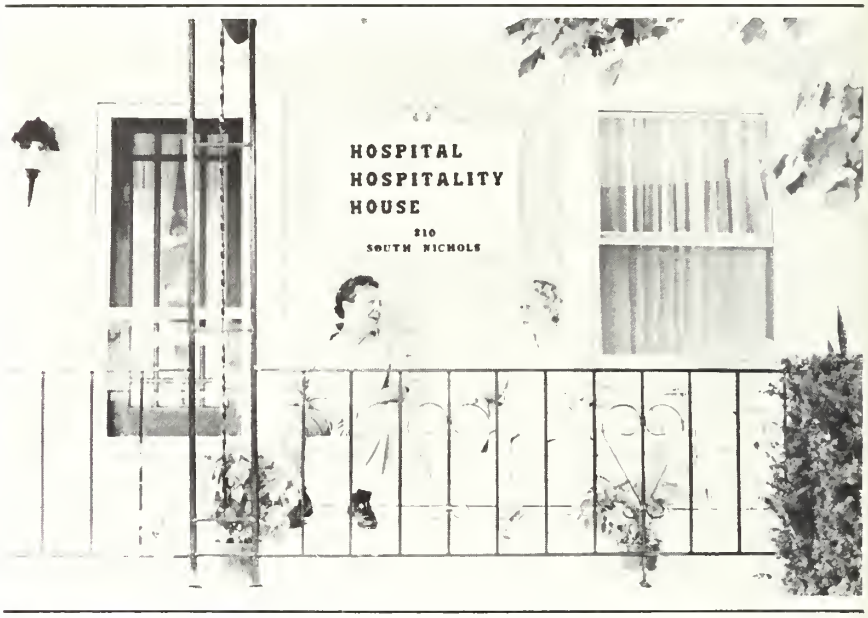


AUXILIARY REPORT

Muriel Osborne (Mrs. John)
ISMA Auxiliary President 1985-86

A hospital vigil can be an intense and difficult experience for the family of a seriously ill hospital patient, especially when the conveniences and comforts of home are not within reach. Uncomfortable sleep in hospital lounges, burdensome motel and meal costs or transportation problems can compound anxieties during a family's health crisis. The HOSPITAL HOSPITALITY HOUSE of Muncie, Indiana is one of only 17 facilities in the nation providing a "home away from home" for solicitous relatives who must travel from outside Delaware County to be at the bedside of a loved one.

The Muncie Hospital Hospitality House accommodations include sleeping quarters, living room, laundry room and a small dining room with self-serve stocked kitchen. While some guests may remain months, many are simply pleased to utilize the House for a nap and cup of coffee, a hot shower, laundry facilities or a little solitude in a home-like environment. Whatever the length of stay or services provided, each guest at HHH finds a welcome "place of rest and an atmosphere of support."



Mr. Dale Fight, director of Muncie's Hospital Hospitality House, relaxes on the front porch with a visitor, Mrs. Martha Higgins. The Delaware-Blackford Medical Auxiliary is among supporters of the HHH.

Dale Fight, HHH director, resides at the House with his wife Mary. Personal experience as a coronary by-pass patient and an organizer of the local Renewed Hearts Club help the Fights to convey a climate of sincere warmth and empathy to guests arriving both day and night. Mr. Fight must "wear many hats" in assuming House director duties ranging from fund raising and public relations to maintenance and office work and even filling in as a chauffeur. "Communication with the hospital has been super," he says. Guests are most frequently referred to HHH by staff of the hospital's Emergency, Coronary Care, Intensive Care and Oncology Units. No fees are charged for bed or board. The HHH is kept alive and well through the combined financial efforts of individuals, organizations, churches, grants and foundations.

Since opening in 1982, the Muncie HHH has had several appreciative guests who returned to their homes throughout the country to evaluate the need for an HHH in their towns. The HHH board of directors finds it gratifying to learn that several hospital communities are working to develop their own Houses based upon experiences at the Muncie HHH.

Each HHH is an independent community service, but representatives have organized a nationwide information network and Conference of Houses, which Muncie will host in 1987. The current objective of the conference is to secure the umbrella of a national corporate sponsor to boost the HHH identity. A well known sponsor could do wonders to increase the public's awareness that HHHs are available and would certainly promote growth of the HHH concept.

The Delaware-Blackford Medical Auxiliary proudly sees the Hospital Hospitality House as an important asset to our county's health care resources. HHH lends a helping hand to families who are "going through a time of emotional, spiritual and financial crisis." The HHH voluntarily provides an aspect of total health care for seriously ill hospital patients whose loved ones must travel from outside the county to be with them. The Auxiliary supports HHH with donations of cash from their Christmas Sharing Card, groceries and staple products to keep the House operational. The Auxiliary salutes HHH as an outstanding display of Hoosier Hospitality! — Donna Polcz, Muncie



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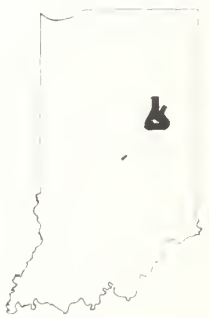
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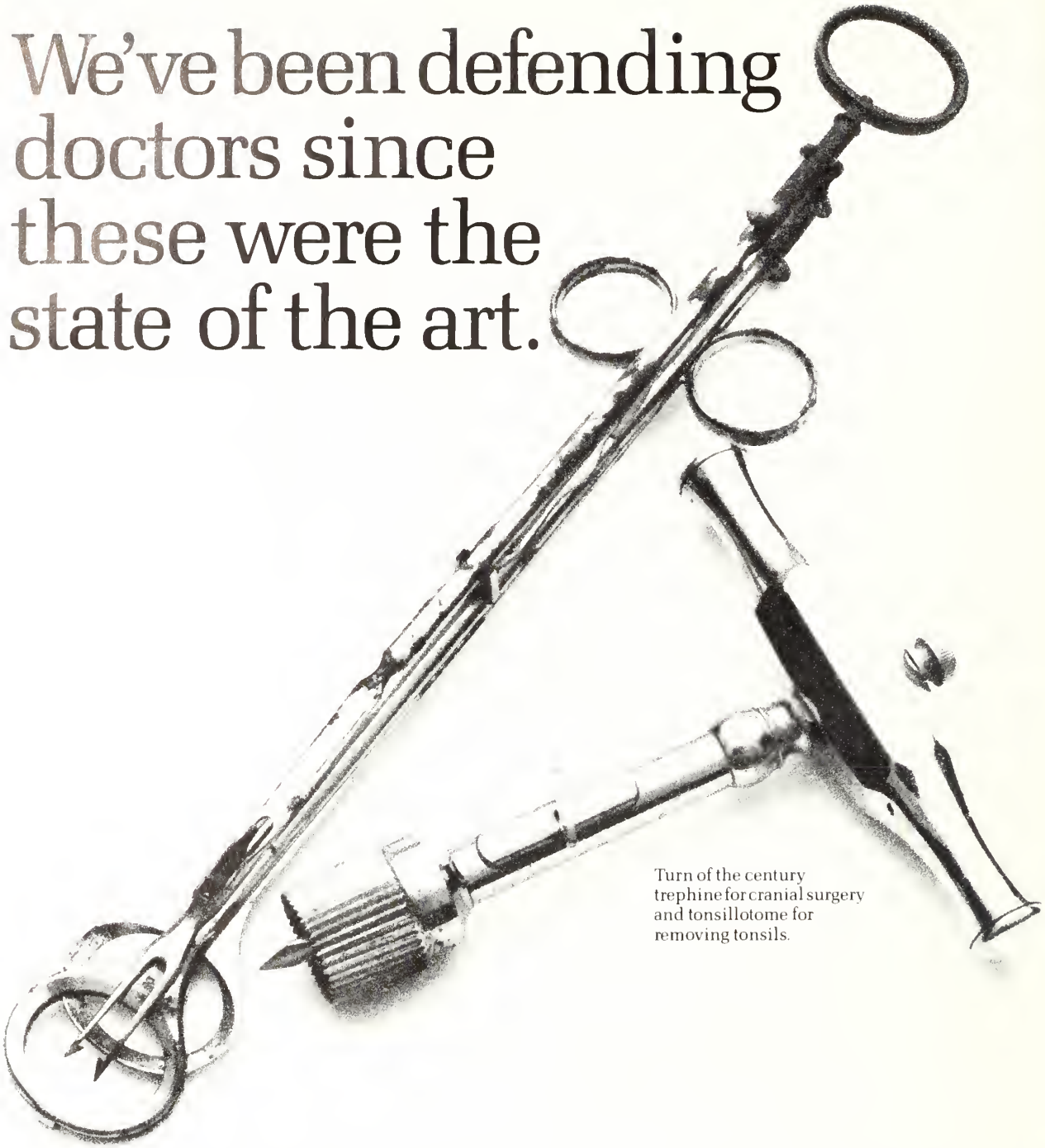
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Brain Stem Tumors

CONTINUED FROM PAGES 993-998

1) What percentage of central nervous system tumors occur as brain stem tumors?
   a) 1% - 5%
   b) 10% - 20%
   c) 50%
   d) 75%

2) Most brain stem tumors occur:
   a) during infancy
   b) during youth
   c) past middle age
   d) in senility

3) In which section of the brain stem do gliomas most commonly occur?
   a) Mesencephalon
   b) Pons
   c) Medulla
   d) Medullary - cervical junction

4) Presenting symptoms of brain stem tumors are typically:
   a) Seizures
   b) Change in sleep pattern
   c) Headache or balance difficulty
   d) Hiccups and yawning

5) The most common physical findings in patients with brain stem tumors are:
   a) Papilledema
   b) Cranial nerve dysfunction, cerebellar and long tract findings
   c) Autonomic instability
   d) Altered mental status

6) Of the following diagnostic tests, which one is most useful in diagnosing brain stem gliomas?
   a) EEG
   b) MRI
   c) Evoked responses
   d) CT without posterior fossa cuts

7) Which MRI pulse sequence combination is seen with brain stem gliomas?
   a) prolonged T_1 and T_2
   b) prolonged T_1 and shortened T_2
   c) shortened T_1 and T_2
   d) MRI does not image malignant brain tumors

8) Which of the following is not an advantage of MRI?
   a) No radiation exposure
   b) Freedom from bone and pantopaque artifacts
   c) Imaging larger extent of tumor compared with CT
   d) Short study time compared to CT

9) Treatment of brain stem tumors is:
   a) never undertaken
   b) often performed without knowledge of their histology
   c) best achieved with total surgical resection
   d) highly successful if both radiation and chemotherapy are used

10) Tumor in which part of the neuraxis will most likely be detected by brain stem evoked response (BAER)?
   a) Spinal cord
   b) Medulla
   c) Pons
   d) Mesencephalon

OCTOBER CME QUIZ Answers

Following are the answers to the CME quiz that appeared in the October 1985 issue: "The Child with a Single Seizure," by David W. Dunn, M.D., and Byung I. Lee, M.D.

1. b	6. c
2. b	7. c
3. c	8. d
4. d	9. c
5. b	10. a

Answer sheet for Quiz: (Brain Stem Tumors. . .)

1. a b c d	6. a b c d
2. a b c d	7. a b c d
3. a b c d	8. a b c d
4. a b c d	9. a b c d
5. a b c d	10. a b c d

I wish to apply for one hour of category 1 AMA Continuing Medical Education credit through the I.U. School of Medicine. I have read the article and answered the quiz on the answer sheet above. I understand that my answer sheet will be graded confidentially, at no cost to me, and that notification of my successful completion of the quiz (80% of the questions answered correctly) will be directed to me for my application for the Physician's Recognition Award of the American Medical Association. I also understand that if I do not answer 80% of the questions correctly, I will not be advised of my score but the answers will be published in the next issue of INDIANA MEDICINE.

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To be eligible for this month's quiz, send your completed, signed application before Dec. 10, 1985 to the address appearing at the top of this page.



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NEWS NOTES

For the Asking . . .

• The American Liver Foundation has published a series of information leaflets, suitable for distribution to patients, on how to maintain liver wellness and on a variety of liver diseases. The topics are: Biliary Atresia, Cirrhosis, Diet and Your Liver, Gallstones and other Gallbladder Disorders, Liver Disease—A Problem for the Child?, Viral Hepatitis, and Your Liver Lets You Live. Physicians interested should call or write the American Liver Foundation, Cedar Grove, N.J. 07009—(201) 857-2626.

• The Mayo Clinic is publishing "Mayo Clinic Health Letter." Each of the 12 monthly issues each year will consist of eight pages of practical health information. Illustrations will be in color. The text is written for easy comprehension by the public at large. The annual subscription rate is $24—two years for $44. To subscribe, write Mayo Clinic Health Letter, Mayo Clinic, Rochester, Minn. 55905 or call (507) 284-4587.

• "The Suicide Epidemic: Emergency Medicine's Challenge" is a 20-minute videotape designed to help physicians identify and work with suicide victims. The tape also aids in determining whether the patient needs to be hospitalized or referred to an outpatient program of some kind. The videotape and study guide are approved for two hours of AMA and ACEP Category 1 credit. $10 for members, $20 for non-members. Write to ACEP Distribution Center, P.O. Box 619911, Dallas, Tex. 75261.

• "Women seeking treatment for premenstrual syndrome (PMS) should be cautious and skeptical." This cautionary statement opens the announcement by the American Council on Science and Health concerning publication of a 28-page report on PMS. The ACSH warning is that although some centers, physicians and clinics are providing excellent care, poor care, shoddy research and outright solicitation also abound. One caution is expressed: "Women with PMS should be aware that no treatment for the disorder as a whole has yet been proven effective." For a complimentary copy, send a self-addressed, stamped (39¢), business-size envelope to PMS Report, ACSH, 47 Maple St., Summit, N.J. 07901.

• "The Chlor-Trimeton Allergy Survival Handbook" has been published by the Schering Corporation. Written in lay language, the booklet discusses "hay fever," to include its root causes, pollens and molds, and the use of antihistamines to stop allergic reaction. It also explains tactics the individual can employ to avoid allergy problems. For a copy, write Allergy Survival Handbook, 1133 Avenue of the Americas, 16th Floor, New York, N.Y. 10036.

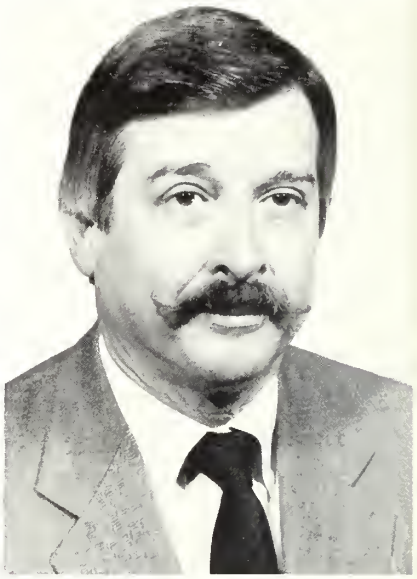
Physicians, Legislators Cooperate to Produce Breast Cancer Booklet

"What You Are About to Read on Breast Cancer Could Save a Life—Yours!" is the title of a 16-page booklet published by physician members of the Medical and Chirurgical Faculty of Maryland and by representatives of the Maryland General Assembly.

The text has been simplified, a glossary added, and a section on "Questions to Ask Your Physician" is now included. The booklet is now being studied to make further improvements.

Searle Funds New Award for Health Research

The American Lung Association (ALA) announces a pledge of $175,000 from Searle Pharmaceuticals to fund a new ALA Career Investigator Award for health research. The Mark Baier Memorial/Searle Research Scholar was established by the people of Searle in memory of and in tribute to an asthmatic son of a Searle executive. Charles H. Scoggin, M.D., of the Eleanor Roosevelt Institute for Cancer Research in Denver, will be the first to hold the title of Career Investigator.



Dr. Ehrlich

Dr. Ehrlich Appointed to ABOG Post

Dr. Clarence E. Ehrlich of Indianapolis has been named director of the Division of Gynecologic Oncology, American Board of Obstetrics and Gynecology.

He will serve three years as director and will be responsible for overseeing the preparation of GYN oncology board exams, the approval and monitoring of training fellowships, and the certification of fellows.

Dr. Ehrlich is also a member of the ABOG's Executive Committee, Evaluation Committee, and Subspecialty Divisions Committee.

He was recently appointed by Dr. William Mixson, president of the American College of Obstetricians and Gynecologists, to serve on the College Task Force to Review the Role of the Obstetrician and Gynecologists in Cancer Detection.

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NEWS NOTES

Here and There . . .

Dr. Clyde G. Culbertson of Columbus received the Tony and Mary Hulman Health Achievement Award for Preventive Medicine/Public Health last month. Dr. Culbertson, a retired Eli Lilly research consultant, was instrumental in producing the Salk vaccine at Lilly.

Dr. L. Michael Silvers is the new president of the Indiana Chapter, American Academy of Family Physicians; Dr. Gregory Larkin is president-elect, Dr. Deborah Allen is vice-president, Dr. Ronald Blankenbaker is speaker, and Dr. Fred Haggerty is vice-speaker.

Dr. Edward F. Elliott Jr. of Anderson and Dr. Joseph R. McColley of Bloomington have been elected to membership in the American College of Radiology.

The Deaconess Hospital Oncology Program of Evansville has been awarded the full three-year approval by the Committee on Approval of the Commission on Cancer, American College of Surgeons.

Dr. George W. Hicks of Indianapolis is author of a chapter entitled "Cerebrospinal Fluid Leaks Following Ear Surgery" for a new book, *Complications of Ear Surgery*, to be published by B. C. Decker, Inc., Ontario.

Dr. Ottis N. Olvey, an Indianapolis internist, has discontinued his private practice, but says he may "do some part-time work in my field, two or three days a week."

Dr. Diane L. Hopen of Fort Wayne has joined Lutheran Hospital as medical director of the hospital's emergency physicians.

Dr. Robert L. Gregory of Indianapolis has been appointed medical director of United Home Life Insurance Co., Greenwood.

Dr. Douglas E. Eglen of Indianapolis has begun a fellowship in surgical pathology at the Indiana University Medical Center.

Dr. Charles E. Montgomery of Logansport has been elected to the board of directors, First National Bankshares, Inc., and its subsidiary, the First National Bank of Logansport.

Dr. Edward L. Broomes of East Chicago has been named "Practitioner of the Year" by the National Medical Association.

Dr. Roger L. Wilkinson, an Anderson family physician, has retired after nearly 40 years of practice.

Dr. Peter R. Foster, an Indianapolis cardiologist, was scheduled to present a paper dealing with cardiac pacemakers during the Third Asian Pacific Symposium on Cardiac Pacing and Electrophysiology, conducted last month in Melbourne, Australia.

Dr. Glenn J. Bingle, director of medical education at Community Hospital of Indianapolis, recently addressed the medical staff of Union Hospital in Terre Haute on "The Inheritance of Colorectal Cancer."

Dr. Hakam Safadi of Gary discussed treatments for chronic lung disease at the September meeting of the Merrillville Breath with Ease Respiratory Health Club.

Dr. Joseph M. Songer of Muncie discussed "Practical Wisdom Regarding Cancer" and "New Trends in Cancer" during a September seminar series sponsored by Ball Hospital; Dr. Jack C. Moore of the Middletown Center for Chemical Dependency also was a guest speaker.

Dr. Henry E. Montoya, an Indianapolis rheumatologist, addressed the local Arthritis Patient Club in September.

Dr. Michael J. Mirro, a Fort Wayne cardiologist, discussed coronary artery disease during a recent meeting of the medical staff at Wabash County Hospital.

Dr. James L. Monks of Hammond discussed "Scleroderma: The Gastrointestinal Tract" during the September meeting of the Scleroderma Foundation of Greater Chicago.

Dr. Clark E. Kramer of Crown Point discussed "Children and Cancer" during the September meeting of the Oncology Support Group of St. Anthony Medical Center.

Drs. Robert R. Penkava, Bernard Lourie and M. Scott Beede of Evansville served as discussants during a September public forum on AIDS, sponsored by the Vanderburgh County Medical Society.

Jimmy Carter Speaks Out on Unnecessary Illness

Former President Jimmy Carter is the first U.S. President to address physicians directly in a medical journal.

The Sept. 13 issue of *JAMA* carries Mr. Carter's message. He asked the Carter Center at Emory University to identify factors most responsible for avoidable illness and early death, and to recommend strategies for prevention.

The answer was tobacco, alcohol, unintended injuries and unintended pregnancies. "Tobacco kills more Americans every 18 months than were killed in all the wars of the 20th century." Strategies for control of tobacco deaths and for control of the other three types of preventable mortality are outlined in the article.

(Note: Recommended reading.)

FDA Approval Continues for ADD-Vantage Drugs

Abbott Laboratories announces FDA approval of their new intravenous (I.V.) drug delivery system. Called *ADD-Vantage*, the system will enable hospitals to reduce drug waste and improve productivity. The system has two components, a flexible plastic I.V. container partially filled with a diluent and a glass vial containing either a powdered or liquid drug.

The FDA has approved the first three drugs for use with the system. They are the widely used I.V. antibiotics manufactured by Eli Lilly and Company: Keflin, Kefzol and Mandol. More than 40 additional drugs, manufactured by a number of different companies, will be reviewed by FDA for approval to become part of the *ADD-Vantage* system.

Indiana Malpractice Act Is Constitutional

The Indiana Medical Malpractice Act was not unconstitutional, the Indiana Supreme Court has ruled.

Reversing a decision by a trial court, the Supreme Court said that the mere fact that there was a delay that may be as long as two years from the time of filing until the time a panel opinion was rendered was not sufficient to hold the Act unconstitutional. In a prior decision, the court found that the legislative concern in passing the Act was the recognition of an emergency that threatened the availability of professional services of physicians to the people of Indiana. The legislature responded in an effort to preserve medical services and to protect the well-being of Indiana citizens.

In its earlier decision, the Supreme Court found that the act was a rational means of obtaining the compelling state interest in continuation of health care services. The court recognized the potential for delays due to the requirement that cases be heard by a review panel before a lawsuit could be initiated.

Rejecting decisions by courts in Florida and Pennsylvania, the Supreme Court said that the delay caused by the review panel requirement was not sufficient to cause the statute to be unconstitutional.—*Cha v. Warnick*, 476 N.E.2d 109 (Ind.Sup. Ct., April 3, 1985).

(Courtesy of *The Citation*, Sept. 1, 1985)

Trauma Victims May Be Suffering from Alcoholism

An editorial in the *Annals of Emergency Medicine* (March 1985) emphasizes that many cases of trauma serious enough to be seen in a hospital, especially those involving falls and burns, may be basically due to alcoholism.

The advice given is to obtain a blood alcohol level when there is indication that alcoholism is involved. Knowledge of alcohol addiction may be helpful in the treatment of the trauma, the authors said, and is also good solid evidence that rehabilitation is or should be part of the program after the trauma is cured.

Cincinnati Ambulances Get Cellular Telephones

Cellular mobile telephones have been installed in 27 ambulances owned by 14 independent companies in Cincinnati. The installation was conducted by Cincinnati's Providence Hospital and Ameritech Mobile Communications, the company that introduced cellular service in the United States two years ago.

Before the mobile phones were installed, ambulance drivers had to radio through a dispatcher to call anyone, and could only contact people who were on the ambulance radio system. Now ambulance squads can call directly to anyone who has a telephone.

Down on Boxing

The American Academy of Family Physicians has joined other medical organizations such as the AMA in expressing concern for the safety of boxing participants. The AAFP resolution recommended that family physicians "make a greater effort to discourage their patients from participating in the sport of boxing."

Physician Recognition Awards



The following ISMA physicians are recent recipients of the AMA's Physician Recognition Award. This award is official documentation of Continuing Medical Education hours earned, and is acceptable proof in most states requiring CME in re-registration that the mandatory hours of CME have been accomplished.



Amodio, Frank J., Evansville
Athar, Shahid, Indianapolis
Aust, Charles H., Fort Wayne
Backs, Alton J., South Bend
Brucker, Perry A., Fort Wayne
Chernish, Stanley M., Indianapolis
Coats, Charles W., Indianapolis
Dalton, Wilson L., Shelbyville
DeLaFlor, Eduardo P., Evansville
Felger, Thomas A., Fort Wayne
Garfield, Martin D., Indianapolis
George, John W., Munster
Hall, David C., Indianapolis
Hicks, Marshall E., Indianapolis
Hoover, Rick L., South Bend
Kaplanis, Paul T., Fort Wayne
Keener, Gerald T., Indianapolis
Koch, Edwin F., Muncie
Lange, John B., East Chicago
Loh, Jerome W., Merrillville
Malachowski, Robert M., Indianapolis
Martin, Freeman, Indianapolis
Mertz, Lydia K., Bristol
Mertz, Max R., Goshen
Mitchelson, John E., Indianapolis
Morrison, Andrew L., Indianapolis
Munoz, Jose C., Fort Wayne
Parks, Herbert E., Indianapolis
Perez, Adela M., Dyer
Phillips, Susan G., Indianapolis
Price, Robert W., Elkhart
Rademacher, Wade, Beech Grove
Rudicel, Max H., Muncie
Samaddar, Prasoon K., Bedford
Smith, John P., Bluffton
Sorak, Katica, Munster
Stettbacher, Lynne L., Fort Wayne
Strate, Randall W., Indianapolis
Thompson, John M., South Bend
Turrell, Eugene S., Indianapolis
Urba, Vytautas V., Munster
Weinland, George C., Columbus

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10—Pres:
Secy:
Annual Meeting:
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Secy: Fred Poehler, LaFontaine
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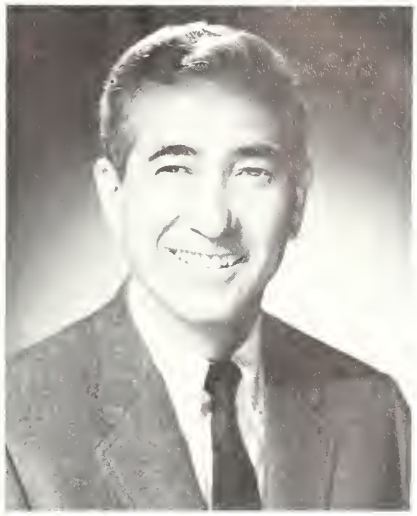
James H. Gosman, M.D.

Dr. Gosman, 70, an Indianapolis dermatologist and former ISMA president, died Aug. 29 at Methodist Hospital.

He was a 1938 graduate of Indiana University School of Medicine and was a veteran of World War II.

Dr. Gosman, a former president of the medical staff at Methodist Hospital, Indianapolis, was a professor of dermatology at the I.U. School of Medicine. He was a fellow of the American Academy of Dermatology.

He was president of the Marion County Medical Society, 1965-66, and president of the Indiana State Medical Association, 1972-73. He had also served as an ISMA trustee, a county society delegate and as an AMA alternate delegate.



Dr. Gosman

Albert J. Miller, M.D.

Dr. Miller, 65, a Lafayette pathologist, died Aug. 6.

He was a 1945 graduate of the University of Wisconsin Medical School.

Dr. Miller was associated with the Dept. of Pathology, Veterinary Medical School, Purdue University. He was certified by the American Board of Pathology and was a member of the College of American Pathologists and the American Society of Clinical Pathologists.

Harry C. Harvey, M.D.

Dr. Harvey, 92, a retired Fort Wayne general practitioner, died Aug. 16 at a retirement home in Franklin.

He was a 1930 graduate of Indiana University School of Medicine and was an Army veteran of World War I.

Dr. Harvey had practiced in Fort Wayne 26 years and was a former president of the medical staff of Methodist Hospital there. He discontinued his practice in 1957 and became director of the Fort Wayne Regional Blood Program of the American Red Cross. He moved to Franklin in 1963 where he served eight years as resident physician for the United Methodist Home.

Paul E. Dingle, M.D.

Dr. Dingle, 78, a retired Richmond obstetrician, died Aug. 30 at his home.

He was a 1937 graduate of the University of Cincinnati College of Medicine and was an Army veteran of World War II.

Dr. Dingle, who retired in 1979, was a former president of the Wayne-Union County Medical Society.

Frederick H. Buehl, M.D.

Dr. Buehl, 53, a Vincennes psychiatrist, died Sept. 14 in a fall at a vacation lodge in Canada.

He was a 1963 graduate of Indiana University School of Medicine and served in the Navy from 1963 to 1965.

Dr. Buehl, a former president of the Knox County Medical Society, was active in ISMA affairs, serving most recently on the Commission on Constitution and Bylaws. He was director of the Comprehensive Community Mental Health Center in Vincennes from 1971 until he entered private practice in 1983. He was a member of the American Psychiatric Association and the Indiana Psychiatric Society.

Hubert M. Rusk, M.D.

Dr. Rusk, 83, a retired Wallace general practitioner, died Sept. 15.

He was a 1927 graduate of Northwestern University Medical School.

Dr. Rusk was a former president of the Fountain-Warren County Medical Society and was a member of the ISMA Fifty Year Club.

Collins R. Wallace, M.D.

Dr. Wallace, 55, a retired Fort Wayne anesthesiologist, died Sept. 4 at his home.

He was a 1956 graduate of Indiana University School of Medicine and was a veteran of U.S. Army service.

Dr. Wallace was certified by the American Board of Anesthesiology. His professional affiliations included the American Society of Anesthesiologists.

Memorials: Indiana Medical Foundation

The Indiana Medical Foundation, Inc. was formed by the Indiana State Medical Association "for religious, charitable, scientific, literary or educational purposes." It provides financial assistance to support the educational mission of INDIANA MEDICINE.

Contributions made to the Foundation are deductible by donors in accordance with the Internal Revenue Code. Gifts are deductible for Federal estate and gift tax purposes.

The Foundation is pleased to acknowledge the receipt of gifts in remembrance of the following individuals:

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Elsie A. Reid
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Mildred Ramsey

COMMERCIAL ANNOUNCEMENTS

BOARD CERTIFIED or **eligible pediatrician** (subspecialty desirable but not required) to do general pediatrics as 2nd pediatrician in a multi-specialty group with HMO and FFS practice. Full or part-time considered. Must be willing to share night and weekend call. Contact Jan Walker, M.D., Arata Medical Group, 3301 Lake Avenue, Fort Wayne, IN 46805.

VACANCIES Madison State Hospital, Madison, IN 47250: **Physician E III** – 1 part-time (20 hours per week) and 1 full-time (40 hours per week). Minimum qualifications: License to practice medicine in the State of Indiana. Pay range: part-time, $22,321-$34,619; full-time, $44,642-$69,238.
Psychiatrist E I – 1 full-time (40 hours per week). Minimum qualifications: License to practice medicine in the State of Indiana; certification by the American Board of Psychiatry and Neurology OR two (2) years of full-time paid clinical psychiatry practice beyond completion of approved residency training program in Psychiatry. Pay range: $53,258-$98,826. Contact: Paul Bryan, M.D., Madison State Hospital, Madison, IN 47250–(812) 265-7214.

WANTED – Board Certified Surgeon with interest in vascular surgery to join 2 general surgeons, ages 63 and 47. Busy general surgical practice looking after HMO and fee-for-service patients in a multi-specialty group practice setting. Salary negotiable; benefits plus ownership possibilities. Curriculum vitae to Dr. Allen J. Perry, M.D., Medical Director, Arata Medical Group, 3301 Lake Avenue, Fort Wayne, Indiana 46805.

MEDICAL DIRECTOR – Board certification in Internal Medicine or Family Practice. Will coordinate medical services for 830 mentally retarded residents. An attractive facility in southeastern Indiana about 70 miles from Indianapolis, Cincinnati and Louisville. Salary ranges $48,930 to $76,076. Excellent fringe benefits. Contact William J. Culley, Ph.D., Asst. Superintendent-Modules, Muscatatuck State Developmental Center, Box 77, Butlerville, Ind. 47223, phone (812) 346-4401.

CARE CENTER – Immediate need for primary care physician for newly opened care center in north central Indiana. Established office hours, coverage with female family physician. OB optional. Guarantee offered, office space, malpractice and other benefits. Contact: Stephanie Lahners, Spring Creek Road, Rt. 2, Box 61, Barrington Hills, Illinois 60010–(312) 382-1228.

FACULTY POSITION – Indiana University School of Medicine. Faculty position available immediately. Applicants must possess a Ph.D. in Immunology, Immunochemistry, or related area and have completed their postdoctoral training. Individuals must be interested in basic science research effort in Transplantation and Tumor Immunology and teaching junior and senior medical stuoents. Individual is expected to develop a self-supporting research program. Contact in writing: Jay L. Grosfeld, M.D., Chairman, Dept. of Surgery, Indiana University School of Medicine, 545 Barnhill Drive, Indianapolis, IN 46223. I.U. is an affirmative action, equal opportunity employer.

EXPERIENCED Family Practitioner or Internist opening immediately available in well established medical group. Send curriculum vitae with references to Richard Knaflich, P.O. Box 27238, Indianapolis, Ind. 46227.

STAFF PSYCHIATRIST – Immediate opening for full-time staff psychiatrist (bd. elig./cert.) to join full-time medical director at developing CMHC in Indianapolis area. Inpt., outpat., consult., and day hosp. svc. I.U. Med. Ctr. in nearby Indpls. Competitive sal. and bnfts. Reply to Susan M. Anderson, M.D., Medical Director, Cummins MHC, P.O. Box 158, Danville, IN 46122.

1986 CME CRUISE/CONFERENCES ON SELECTED MEDICAL TOPICS – Caribbean, Mexican, Hawaiian, Alaskan, Mediterranean. 7-12 days year-round. Approved for 20-24 CME Cat. 1 credits (AMA/PRA) and AAFP-prescribed credits. Distinguished professors. FLY ROUND-TRIP FREE ON CARIBBEAN, MEXICAN AND ALASKAN CRUISES. Excellent group fares on finest ships. Registration limited. Pre-scheduled in compliance with present IRS requirements. Information: International Conferences, 189 Lodge Ave., Huntington Station, N.Y. 11746–(516) 549-0869.

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OFFICE SPACE AVAILABLE: Greenwood Professional Park. Excellent accommodations in an established medical complex. Attractive. Well landscaped setting. Plenty of convenient parking. Complete laboratory and radiological services on premises. Centrally located in the fastest growing area of Indiana. Two miles from new University Heights Hospital. Ideal location for the individual practitioner or as an additional location for group practices. Ready for occupancy. No leasehold expenses required. For additional information, please call (317) 881-3565.

EMERGENCY MEDICINE positions available as soon as November 1985. Rotation through St. Vincent Hospital, Indianapolis and new St. Vincent Carmel Hospital. Competitive hourly salary. Send CV to Susan Stephens, M.D., 11011 Ditch Rd., Carmel, IN 46032.

Commercial announcements are published as a service to members of the Indiana State Medical Association. Only ads considered to be of advantage to members will be accepted. Advertisements of a truly commercial nature (e.g., firms selling brand products, services, etc.) will be considered for display advertising.

All orders must be in writing and will automatically be set in regular classified type. *Box numbers are not available.*

Charges:

Indiana physicians	25¢ word ($5 min)
Out-of-state physicians	35¢ word ($7 min)
Hospitals health care facilities	50¢/word ($10 min)
Realtors commercial recruitment and all others	75¢ word ($15 min)

Deadline: First working day of month preceding month of publication.

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Address: INDIANA MEDICINE, 3935 N. Meridian St., Indianapolis, Ind. 46208.

EMERGENCY MEDICINE Position Available: Opportunity for experienced Emergency Physician to join professional group practicing in northwestern Indiana. Contact Dr. Daniel Philipsborn at (312) 448-3224.

OFFICE FOR RENT: 1700 sq. ft. spaces. 32-year-old well established medical practice. Reasonable terms. Six examining rooms plus two offices; reception center; parking; security system. Equipment and records included. Suitable for family practice, general internist, general surgeon or any combination. For further information, contact Mr. Mark May, (317) 283-2179.

VACATION ON BEAUTIFUL SANIBEL ISLAND, FLORIDA—Luxury Gulf-front 2 bdrm/2 bath condo for rent w/pool, tennis courts, and BBQ facilities. Seasonal rates. Contact: M. Evans, PH. (312) 361-4742.

VERSATILE SURGEON wanted to complement aggressive family practice group in rural northeastern Minnesota resort community. Well equipped 40-bed hospital with proven surgical practice volume. Outstanding outdoor recreational opportunities with time off to enjoy it. Reply with CV to E. Johnson, Ely Medical Center, Ltd., 224 E. Chapman St., Ely, Minn. 55731—(218) 365-3151.

OFFICE SPACE AVAILABLE: Four-year-old office designed for solo practitioner. 1,470 sq. ft. Excellent practice location—2 miles from 600-bed multispecialty hospital. Evansville, an ideal site for practice and family. Contact: S. E. Braun, M.D., 8420 Chapel Hill W., Evansville, Ind. 47712—(812) 985-5556.

EMERGENCY MEDICINE position available: Opportunity for experienced Emergency Physician to work weeknights 6 p.m. to 8 a.m., Kendallville, Ind. Contact Mr. John F. Ling Jr., Administrator. (219) 347-1100, Ext. 120.

FULL-TIME FAMILY PRACTITIONER or an Internist wanted by an established group. Regular hours and competitive compensation. Submit C.V. to H.P.I., P.O. Box 27246, Indianapolis, Ind. 46227. All inquiries treated with strict confidence.

ANESTHESIOLOGIST, BE, available for locum tenens work. Licensed in Indiana and Michigan. CV on request. Please contact: W. T. Kirsten, M.D., P.O. Box 542, Lapeer, Mich. 48446 or call (313) 667-9309.

EMERGENCY MEDICINE Position Available: Opportunity for experienced Emergency Physician to join professional group practicing in Hobart and Gary, Indiana. Contact Dr. Cornelius Arnold at (312) 747-7115.

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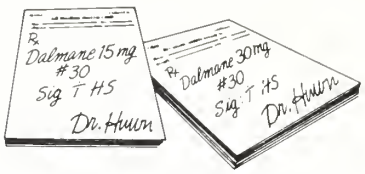
The recommended dose in elderly or debilitated patients is 15 mg. Contraindicated in pregnancy.

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Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Withdrawal symptoms rarely reported; abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase, and paradoxical reactions, *e.g.* excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect. *Adults*: 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients*: 15 mg recommended initially until response is determined.

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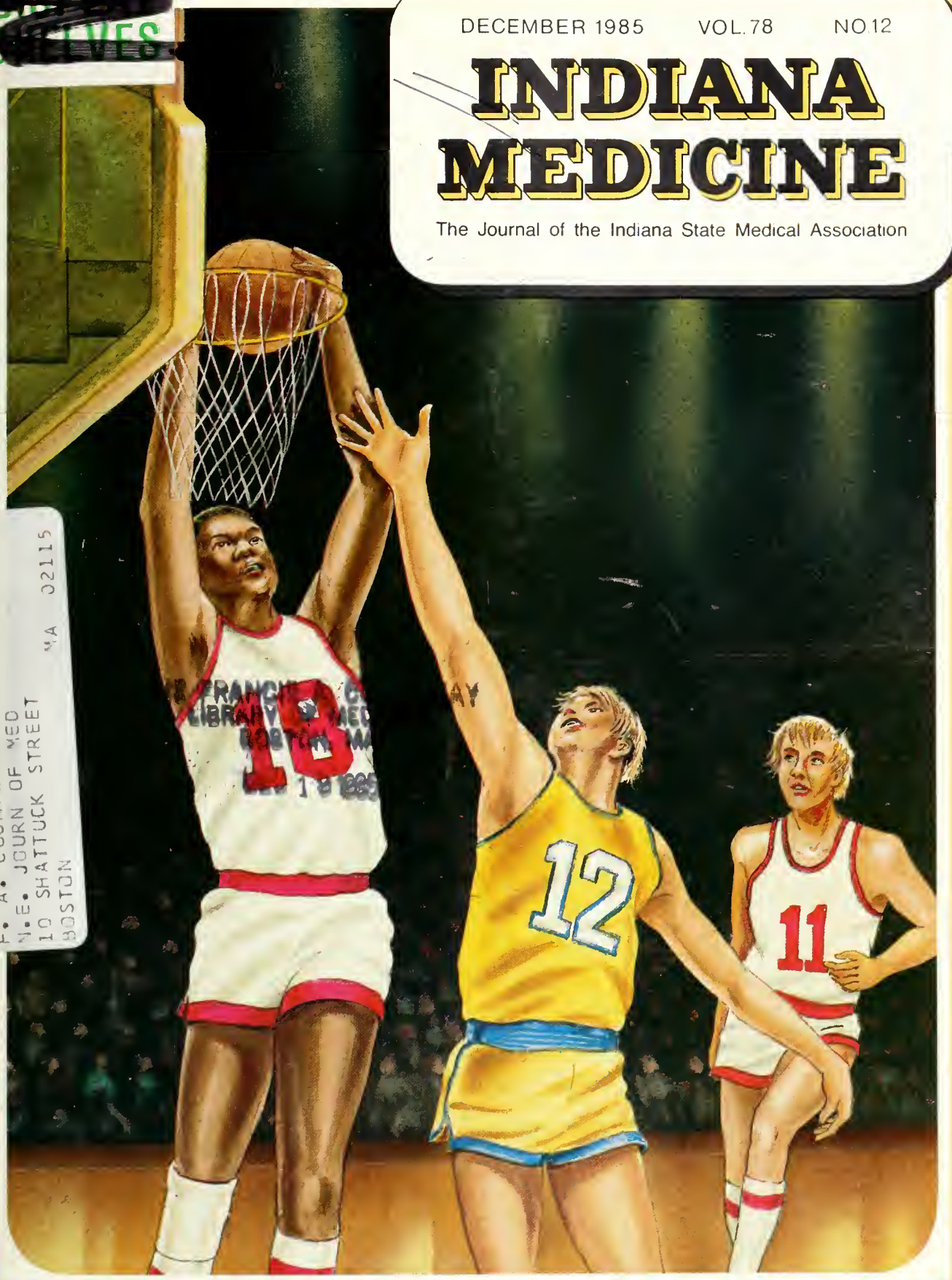
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The Journal of the Indiana State Medical Association



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DECEMBER 1985

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USPS 284-440
ISSN 0746-8288

OFFICE OF PUBLICATION:
3935 N. Meridian St.,
Indianapolis, Ind. 46208
Tel: (317) 925-7545

INDIANA MEDICINE (ISSN 0746-8288) is published monthly by the Indiana State Medical Association. Second-class postage paid at Indianapolis, Ind.
POSTMASTER: Send address changes to INDIANA MEDICINE, 3935 N. Meridian St., Indianapolis, Ind. 46208.
Yearly subscription rates: $20 domestic, $22 Canada, $23 foreign. Library rates: $18 domestic, $20 Canada, $21 foreign. Senior ISMA members and full-time medical students—$10. Single copies not available. Subscriptions renewable only in January and July.

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All issues since 1967 are available on microfilm from University Microfilms International, 300 N. Zeeb Rd., Ann Arbor, Mich. 48106. Indexed in Index Medicus and Hospital Literature Index.

Advertising rates and data available upon request.



ABOUT THE COVER

A survey examining athletic health care management in Indiana's secondary schools indicates that the quality of such health care is inconsistent. The survey, conducted by the Governor's Council for Physical Fitness and Sports Medicine, showed that only 37% of Indiana high schools have a specifically designated team physician. For an analysis of the overall situation, see our cover feature in this issue.—COVER BY FRED KINGHORN

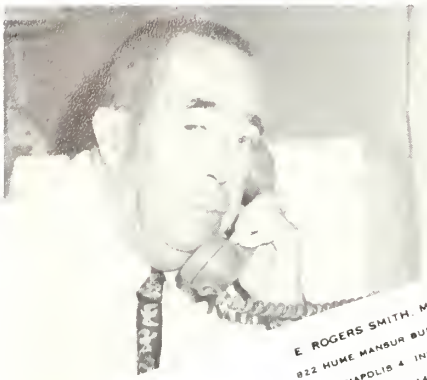
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MEDICAL MUSEUM NOTES

CHARLES A. BONSETT, M.D., Indianapolis



E. Rogers Smith

Christmas, a few drinks, a camping trip and a dead skunk are the unlikely ingredients of the "Dear Old Pal" letter on this page. It was written 21 years ago by Dr. E. Rogers Smith (1891-1972).

Those who remember Dr. Smith's mischievous wit should enjoy reading his holiday greeting to Dr. William H. Norman, a 1933 graduate of the I.U. School of Medicine. Our thanks to Dr. Norman, a retired Orthopedic surgeon, for sharing it.

Christmas 1964

Dear Old Pal:

Well, about this time of the year I usually take a moment to write a few letters to my good friends: the time when I remember all the good things and indulge myslef to the extent of getting a little sentimental.

It is a blustery evening, but here in my Den it's cozy and comfortable. I'm sitting before a nice open fire with my typewriter, sort of half listening to the radio and slowly sipping a nice, Maker's Mark on Rocks. I only wish you were here, and since you are not, the least I can do is to toast your health and happiness, so time out, old pal --------- while I bend my elbow to you.

I just took time out to mix another Maker's Mark and while I was out in the kitchen I thought of all the time I would waste this evening if I went out to mix another drink every once in a while, so I just made up a big pitcher of Bourbon and Water and brought it back inw ith me so i'd havr it right here besdeeme and wouldn't hav to waste time making mor of them. So not im all set and here goes. Besides Marker's Make are agreat drrink. For some reson they neverseeme to affec me in the slightest. Can drink thrm all day long. so here goes.

The greatessts thing in tje wokld is friendship. Andbelive me pal you are the gearets pal anybody everhad. Do you remembre all the swell times we had togethe pal ? ? / The wonderrful camping trisp. Ill never gorset the time yoi put the dead skunnk in my slipping bag. ha ha Boy how we alaughed didn we. Never did get the stin kout oout of it. Bit it was frety funnya anywhaya. I still laught about it onec in a whole. Not as muhc as I used to. But what the kcek & after all you still my bestt ol pal. and if a guy can't hav a lauhgh on a good treu freidn onc in a whiel whta the heck.

Dam pitcher is impty so i jus wnetentand ma de anouterone and i sure wisch you weer here old pal to help me drink these Burboas becaus they are simply daliuoeius. Parn me iwhle i lif my flass to you good leahth oncemroe becuas you are the bests pal i go Orf cours why a pal would do a dirty thinbliek puting a skuns in a nother pals slepin bagg i"m damb if I know. That aws a lousi thin for anybodynyly to do an only a fristcals hele wouldit. Wasna adm dam bit funney. Still stinkks. And if you thininkit (s funey your a dirty lous anasd fare as i i(m concerned you cn go plym to hell and stys ther you dirty lous. To hel with ouy/

Noel Noel Noel

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WHAT'S NEW?

News of what is new in the medical supply industry is composed of abstracts from news releases by book publishers and manufacturers of pharmaceuticals, clinical laboratory supplies, instruments and surgical appliances. Each item is published as news and does not necessarily constitute an endorsement of a product or recommendation for its use by INDIANA MEDICINE or by the Indiana State Medical Association.

Medical Diagnostic Services announces the availability of a low-cost, modular arthroscopy device. The all new Focuscope™ will enable the physician to perform diagnostic in-office arthroscopy procedures using minimal incision techniques. The modular design allows for adaptation to all conventional Otoscope/Ophthalmoscope power handles and halogen light generators.

Achievement House announces FASTread™, a program in the form of software for personal computers, which lets professionals, managers and students double, triple or further increase their reading rates. Eighty lessons of self instruction, practice and testing are provided. FASTread is $59.95 in single units and comes with a 30-day money-back guarantee.

Hewlett-Packard has a new set of 12 snap-terminated monitoring lead sets in addition to its spring-clip-terminated lead sets. Advantages of the new sets are better durability, and a lower price. Electrical performance is equal to the spring-clip sets.

Hoffmann-La Roche has just completed a newly constructed facility for the manufacture of sterile injectable pharmaceuticals. The work is done in an environment that is virtually free of organisms and particles and is cleaner by far than a hospital operating room.

Hand-A-Cize is a three-level exercise system for developing and maintaining joint flexibility. It was devised by an arthritic. The system has three graded-strength exercisers and avoids the difficulties arthritis patients experience with high-tension spring exercisers. It was developed by a physician and comes in kit form with a handy exercise program that emphasizes consultation with a physician.

Eli Lilly announces that it will begin marketing a new human insulin product, Humulin®. L. Humulin L is the Lente formulation of the company's human insulin made by recombinant DNA technology.

Oculab, Inc. announces the TONOPEN™, a computerized, pen-sized microelectronic tonometer. It allows measurement of intraocular pressure more easily than currently possible. It is battery-operated and does not require a slit-lamp or examining room. Available in February 1986.

"Medical Malpractice Verdict, Settlements & Experts," the only medical malpractice jury verdict reporter, is published each month by M. Lee Smith of Nashville, Tenn. The publishers are not affiliated with any organization of lawyers, physicians, insurance companies, or consulting firm. The annual subscription rate is $197.

Kodak has a new plug-in module for use with its typewriter-size Ektachem DT60 analyzer. It will enable physicians, in the convenience of their offices, to test for enzymes: alanine aminotransferase (ALT), alkaline phosphatase (ALEP), aspartate aminotransferase (AST), creatine kinase (CK), gamma glutamyltransferase (GGT) and lactic dehydrogenase (LDH).

Patient Technology, Inc. announces a computer adaptation for reducing the time now required for the nursing staff in recording necessary clinical data on patients. The program is called "Medtake." It is a data acquisition system featuring bedside terminals to minimize time spent by nurses recording and summarizing standard patient data and vital signs. The reduction in paperwork saves up to 1½ hours per nurse per shift and may cut down nursing overtime.

Detecto Scale Company is introducing a new Series 6700 neonatal scale, which indicates either pounds or kilos and weighs to 0.1 ounce or 5 gram increments. It has a built-in measuring tape for length. It has a capacity up to 30 pounds or 15 kilograms and is easy to clean.

Clinical research has found that the most appropriate dosage for Tagamet is 800 mg only once a day at bedtime. "Control of gastric acid during the night alone is sufficient to heal ulcers," states Dr. Brian Dickson of Smith Kline & French Laboratories. The 800 mg dose was found to be superior to both smaller and stronger doses. The new dosage will be reviewed by the FDA.

Midmark Corporation has a new 4-page folder describing operating tables especially suited for surgical procedures in the office. The Midmark 111 and 119 Universal Power Tables, the 112 Power Specialty/Procedures Table and the Midmark 485 Surgi-Med Table are included. A chart shows positions obtained on each table. Popular accessories are pictured and described.

The Amcest Corporation has a new security system for the elderly, disabled or infirm. This includes those who are home from the hospital early and may require emergency aid. A device, worn around the neck, can summon assistance by pressing a button with thumb and forefinger. Also, there is a wireless radio frequency pendant, a receiver, and the emergency communications center. When the button on the pendant is pressed, a computerized message is transmitted through existing telephone lines to the emergency center. The system is named PERSYS.

Thieme-Stratton announces the second edition and greatly improved *Pocket Atlas of Human Anatomy*. The author is Prof. Dr. Heinz Feneis of Tubingen, West Germany. It has been translated into English. It contains 496 pages with 800 clear line drawings, softcover, Flexibook. U.S. price is $15.

Angina comes in many forms...

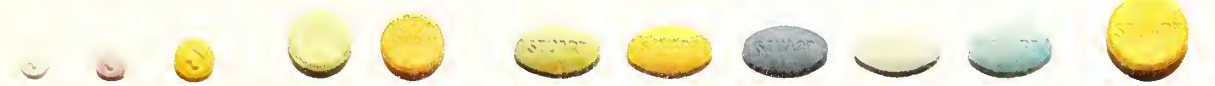


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See following page for brief summary of prescribing information

SORBITRATE
(ISOSORBIDE DINITRATE)

Please consult full prescribing information before use. A summary follows:

INDICATIONS AND USAGE: SORBITRATE (isosorbide dinitrate) is indicated for the treatment and prevention of angina pectoris. All dosage forms of isosorbide dinitrate may be used prophylactically to decrease the frequency and severity of anginal attacks and can be expected to decrease the need for sublingual nitroglycerin.

The sublingual and chewable forms of the drug are indicated for acute prophylaxis of angina pectoris when taken a few minutes before situations likely to provoke anginal attacks. Because of a slower onset of effect, the oral forms of isosorbide dinitrate are not indicated for acute prophylaxis.

CONTRAINDICATIONS: SORBITRATE is contraindicated in patients who have shown documented hypersensitivity or idiosyncrasy to it or other nitrates or nitrites. Epinephrine and related compounds are ineffective in reversing the severe hypotensive events associated with overdose and are contraindicated in this situation.

WARNINGS: The benefits of SORBITRATE during the early days of an acute myocardial infarction have not been established. If one elects to use organic nitrates in early infarction, hemodynamic monitoring and frequent clinical assessment should be used because of the potential deleterious effects of hypotension.

PRECAUTIONS: General: Severe hypotensive response, particularly with upright posture, may occur with even small doses of SORBITRATE. The drug should therefore be used with caution in subjects who may have blood volume depletion from diuretic therapy or in subjects who have low systolic blood pressure (eg, below 90 mmHg). Paradoxical bradycardia and increased angina pectoris may accompany nitrate induced hypotension. Nitrate therapy may aggravate the angina caused by hypertrophic cardiomyopathy.

Marked symptomatic orthostatic hypotension has been reported when calcium channel blockers and organic nitrates were used in combination. Dose adjustment of either class of agents may be necessary.

Tolerance to this drug and cross tolerance to other nitrates and nitrites may occur. Tolerance to the vascular and antianginal effects of isosorbide dinitrate or nitroglycerin has been demonstrated in clinical trials, experience through occupational exposure, and in isolated tissue experiments in the laboratory. The importance of tolerance to the appropriate use of isosorbide dinitrate in the management of patients with angina pectoris has not been determined. However, one clinical trial using treadmill exercise tolerance (as an end point) found an 8 hour duration of action of oral isosorbide dinitrate following the first dose (after a 2 week placebo washout) and only a 2 hour duration of effect of the same dose after 1 week of repetitive dosing at conventional dosing intervals. On the other hand, several trials have been able to differentiate isosorbide dinitrate from placebo after 4 weeks of therapy and, in open trials, an effect seems detectable for as long as several months.

Tolerance clearly occurs in industrial workers continuously exposed to nitroglycerin. Moreover, physical dependence also occurs since chest pain, acute myocardial infarction, and even sudden death have occurred during temporary withdrawal of nitroglycerin from the workers. In clinical trials in angina patients, there are reports of anginal attacks being more easily provoked and of rebound in the hemodynamic effects soon after nitrate withdrawal. The relative importance of these observations to the routine, clinical use of isosorbide dinitrate is not known. However, it seems prudent to gradually withdraw patients from isosorbide dinitrate when the therapy is being terminated, rather than stopping the drug abruptly.

Information for Patients: Headache may occur during initial therapy with SORBITRATE. Headache is usually relieved by the use of standard headache remedies or by lowering the dose and tends to disappear after the first week or two of use.

Drug Interactions: Alcohol may enhance any marked sensitivity to the hypotensive effect of nitrates.

Isosorbide dinitrate acts directly on vascular smooth muscle; therefore, any other agent that depends on vascular smooth muscle as the final common path can be expected to have decreased or increased effect depending on the agent.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No long term studies in animals have been performed to evaluate the carcinogenic potential of this drug. A modified two litter reproduction study in rats fed isosorbide dinitrate at 25 or 100 mg/kg/day did not reveal any effects on fertility or gestation or any remarkable gross pathology in any parent or offspring fed isosorbide dinitrate as compared with rats fed a basal, controlled diet.

Pregnancy Category C: Isosorbide dinitrate has been shown to cause a dose related increase in embryotoxicity (increase in mummified pups) in rabbits at oral doses 35 and 150 times the maximum recommended human daily dose. There are no adequate and well controlled studies in pregnant women. SORBITRATE should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when SORBITRATE is administered to a nursing woman.

Pediatric Use: The safety and effectiveness of SORBITRATE in children has not been established.

ADVERSE REACTIONS: Adverse reactions, particularly headache and hypotension, are dose related. In clinical trials at various doses, the following have been observed:

Headache is the most common (reported incidence varies widely, apparently being dose related, with an average occurrence of about 25%) adverse reaction and may be severe and persistent. Cutaneous vasodilation with flushing may occur. Transient episodes of dizziness and weakness, as well as other signs of cerebral ischemia associated with postural hypotension, may occasionally develop (the incidence of reported symptomatic hypotension ranges from 2% to 36%). An occasional individual will exhibit marked sensitivity to the hypotensive effects of nitrates and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration, and collapse) may occur even with the usual therapeutic dose. Drug rash and/or exfoliative dermatitis may occasionally occur. Nausea and vomiting appear to be uncommon. Case reports of clinically significant methemoglobinemia are rare at conventional doses of organic nitrate. The formation of methemoglobin is dose related and, in the case of genetic abnormalities of hemoglobin that favor methemoglobin formation, even conventional doses of organic nitrate could produce harmful concentrations of methemoglobin.

DOSAGE AND ADMINISTRATION: For the treatment of angina pectoris, the usual starting dose for sublingual SORBITRATE is 2.5 to 5 mg, for chewable tablets, 5 mg, for oral (swallowed) tablets, 5 to 20 mg, and for controlled release forms, 40 mg.

SORBITRATE should be titrated upward until angina is relieved or side effects limit the dose. In ambulatory patients, the magnitude of the incremental dose increase should be guided by measurements of standing blood pressure.

The initial dosage of sublingual or chewable SORBITRATE for prophylactic therapy in angina pectoris patients is generally 5 or 10 mg every 2 to 3 hours. Adequate controlled clinical studies demonstrating the effectiveness of chronic maintenance therapy with these dosage forms have not been reported.

SORBITRATE in oral doses of 10 to 40 mg given every 6 hours or in oral controlled release doses of 40 to 80 mg given every 8 to 12 hours is generally recommended. The extent to which development of tolerance should modify the dosage program has not been defined. *The oral controlled release forms of isosorbide dinitrate should not be chewed.*

DOSAGE FORMS AVAILABLE: Sublingual Tablets (2.5, 5, 10 mg), Chewable Tablets (5, 10 mg), Oral Tablets (5, 10, 20, 30, 40 mg), Sustained Action Tablets (40 mg).



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The Army Medical Department believes in excellence in the practice of medicine. That means allowing our physicians to work at perfecting their medical skills, and not being burdened with endless insurance forms, malpractice premiums, cash flow worries. And they need not concern themselves with the ability of the patient to pay.

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FUTURE FILE

Anesthesia and the Law

The 2nd annual conference on Anesthesia and the Law will be conducted Jan. 17 to 19 at the Hyatt Regency Long Beach in Long Beach, Calif. It is sponsored by the Anesthesiology Dept. of Ohio State University.

For program information and registration, write to the Center for CME, P.O. Box 21697, Columbus, Ohio 43221.

Cosmetic Surgery

Drs. Thomas J. Baker and Howard L. Gordon of the University of Miami School of Medicine will present the 20th annual Symposium on Cosmetic Surgery in Miami Feb. 6, 7 and 8.

The fee for members of the American Society of Plastic and Reconstructive Surgeons, the Plastic Surgery Educational Foundation and the American Society for Aesthetic Plastic Surgery is $500. The fee for non-members is $600, and for residents with a chief of service letter of verification, $250.

Write to Thelma MacGregor, Cosmetic Surgery Symposia, Cedars Medical Center, 1400 N.W., 12th Ave., Miami, Fla. 33136.

Trauma Management

"Trauma Management 1986" is the subject of a CME conference that will be conducted Feb. 3 to 5 at the U.S. Grant Hotel in San Diego. Up to 18 hours of AMA/CMA credit.

Contact CME, M-017, UC San Diego School of Medicine, La Jolla, Calif. 92093—(619) 452-3940.

Breast Reconstruction

The second annual Educational Symposium on Breast Reconstruction will be held at St. Joseph's Hospital in Atlanta Jan. 24 to 26. Registration fee is $450.

Register by writing before Jan. 1 to SESPRS Breast Reconstruction Symposium, John H. Hartley Jr., M.D., 3280 Howell Mill Road, #111, Atlanta, Ga. 30327.

The *Journal of the American Medical Association* publishes a list of CME courses for the United States twice yearly. The January listing features courses offered from March through August; the July listing features courses offered from September through February.

Family Practice

The 10th annual Midwinter Family Practice Update will be conducted by the CME Office of the University of Michigan Medical School Jan. 26 to 31, at Bellaire, Mich. Physician fee is $295. 20 Category 1 credit hours.

For more, phone or write Gayle Fox, Office of CME, Towsley Center, Box 057, Ann Arbor, Mich. 48109—(313) 763-1400.

Burn Care

"Practical Solutions to Problems in Burn Care" is the title of a symposium sponsored by the University of Florida College of Medicine, to be conducted Jan. 30 to Feb. 1 at the Holiday Inn Surfside, Clearwater, Fla.

Registration fee for physicians is $275, for residents $139, and for nurses, therapists and other health care professionals, $175.

Writ to University of South Florida College of Medicine, Office of CME, 12901 N. 30th St., Tampa, Fla. 33612.

Methodist Hospital CME

Jan. 17-18: Advanced Cardiac Life Support Course, Indianapolis—15 credit hours.

Feb. 14-17: 2nd Perinatology Symposium, Sugar Loaf, Mich.—10 credit hours.

March 1-2: 2nd Symposium on Extracorporeal Shock Wave Lithotripsy, Indianapolis.

March 14-15: Advanced Trauma Life Support Course, Indianapolis—16 credit hours.

For more information, contact Dixie Mattingly, CME coordinator, Graduate Medical Center, Methodist Hospital of Indiana—(317) 929-3733.

Infectious Diseases

"Advances in Clinical Infectious Diseases: Update 1986" is the subject of a CME course scheduled for Feb. 27 to March 1 at the Sheraton Coconut Beach in Kauai, Hawaii. Category 1 credit hours: 11.5.

Write or phone Dove Margenau, Office of CME, University of Michigan Medical School, Towsley Center, Box 057, Ann Arbor, Mich. 48109—(303) 763-1400.

Emergency Medicine

An Emergency Medicine ski conference is scheduled at Mammoth Lakes, Calif., from March 9 to 14. It is co-sponsored by the University of California, Irvine and the Orange County Emergency Department Nurses Assn.

Fees are $325 for physicians, $190 for nurses, and $225 for physicians in training and physician assistants.

Contact Medical Conferences, Inc., P.O. Box 52-B, Newport Beach, Calif. 92662—(714) 650-4156.

Pediatrics/Family Practice

"Review and Update: General Pediatrics and Family Practice" is the subject of a CME course to be conducted by the University of Nebraska Medical Center at the Sheraton Royal Waikoloa, Kailua, Kona, Hawaii from Feb. 26 to March 5.

The correspondent is Marge Adey, Nebraska Center for CME, 42nd & Dewey Ave., Omaha, Neb. 68105—(402) 559-4152.

Internal Medicine

"Clinical Topics in Internal Medicine" is the title of a CME session to be presented by the Scott and White Clinic and Texas A&M University College of Medicine from March 15 to 22 at the Prospector Square Hotel, Park City, Utah.

Contact Office of CME, Scott and White, Temple, Tex. 76508—(817) 774-2350.

CANCER CORNER

WILLIAM M. DUGAN, JR., M.D.
Clinical Oncology Center, Methodist Hospital of Indiana

THE AMERICAN CANCER SOCIETY, Indiana Division, Inc., provides a grant of $500 to support specially selected nurses attending the Annual Oncology Nursing Society Congress. Please inform any interested nurses wishing to apply for this grant. We feel this is a valuable service of the American Cancer Society in support of increased professional development for nurses working in oncology settings. Criteria for nurse applicants:

1. Be a registered nurse with a current Indiana license.

2. Be a nurse interested in oncology nursing care and having at least two years previous oncology experience. Employment on an oncology unit is not required but exposure to individuals with cancer is essential.

3. Be a member of the Oncology Nursing Society.

4. Locally, be an active ACS volunteer with documented evidence of community and professional involvement.

5. Recipients of the grant may not apply again for two years. This assures that grant monies will not be used repeatedly by a limited group of nurses.

6. Not be funded by another agency for the same purpose.

Upon conclusion of the Congress, the nurse will agree to:

1. Complete a brief written report using the designated form. Submit it to the American Cancer Society within one month following the Congress.

2. Within three months, conduct a program to disseminate information gained at the Congress. Program options may be staff development within your institution, a community education program, or a presentation at a professional meeting, such as the local ONS interest group, etc.

For further information, applications, etc, write to the Medical Affairs Director, ACS, Indiana Division, Inc., 9575 N. Valparaiso Ct., Indianapolis 46268, or call (317) 872-4432. Please note that applications must be received in the American Cancer Society Office no later than February 1, 1986, to be considered for the Spring Congress.

THE NATIONAL HEMOPHILIA FOUNDATION is currently accepting applications for the Judith Graham Pool Postgraduate Research Fellowships for the 1986-87 academic year. The deadline for submitting this application is January 1, 1986. Individuals may apply directly to: The National Hemophilia Foundation, The Soho Building, 110 Greene Street, Rm. #406, New York, N.Y. 10012 for grants of up to $20,000 for clinical or basic research in the areas of biochemical, genetic, hematologic, orthopedic, psychiatric or dental aspects of the hemophilias or VonWillebrand's Disease. The Foundation also encourages individuals who are conducting research in the areas of rehabilitation, therapeutic modalities, or social features of these disorders to apply.

In 1965, Dr. Judith Graham Pool discovered a simple method of extracting the clotting factor from normal blood. This opened the door to a series of rapid developments which have revolutionized the treatment of hemophilia. Replacement therapy (infusion of the missing clotting factor to prevent or stop bleeding) has made it possible for persons with hemophilia to live relatively normal and productive lives and to avoid, in large measure, the potentially crippling effects of the disease. But the battle against hemophilia is far from over.

The National Hemophilia Foundation Judith Graham Pool Fellowships are designed to enhance hemophilia-related research through the support of young investigators. The program is aimed at supporting research studies of high scientific merit and relevance to hemophilia and stimulating the lifelong interest in hemophilia of promising investigators.

Since the program's inception in 1971, 22 scientists have been funded for one- or two-year studies, which have resulted in vital insights into the mystery of hemophilia and other blood-clotting disorders. NHF Fellows have played a role in the development of better concentrate, more accurate hemophilia carrier testing and a more detailed understanding of the genetics of hemophilia.

For further information or for an application, please call Lisa Flam, (212) 219-8180.

"Diet, Nutrition and Cancer Prevention: A Guide to Food Choices," adapted by NCI from "Nutrition and Cancer Prevention: A Guide to Food Choices," written by Lorelei and Charles DiSogra, is available free from NCI or Office of Cancer Communications, NCI, Bldg. 31, Rm. 10A18, Bethesda, Md. 20205, or by phoning 1-800-4-CANCER.

Seven Truths About Cancer That YOU SHOULD KNOW.

1. Most cancers are curable . . . detected early and given prompt treatment.

2. Cancer is not contagious or hereditary.

3. Breast cancer and uterine cancer, leading causes of death in women, are easily detected, and therefore most quickly cured if recognized early.

4. Lung cancer is a leading cause of death in men.

5. Cigarette smokers are known to develop lung cancer more readily than non-smokers.

6. Cancer can be cured by surgery, radiation and chemotherapy.

7. Alertness to the Warning Signs of Cancer and regular physical examinations give you the greatest protection against cancer.

BALANCED CALCIUM CHANNEL BLOCKADE!



Low incidence of side effects
CARDIZEM® (diltiazem HCl) produces an incidence of adverse reactions not greater than that reported with placebo therapy, thus contributing to the patient's sense of well-being.

*Cardizem is indicated in the treatment of angina pectoris due to coronary artery spasm and in the management of chronic stable angina (classic effort-associated angina) in patients who cannot tolerate therapy with beta-blockers and/or nitrates or who remain symptomatic despite adequate doses of these agents.

References:
1. Strauss WE, McIntyre KM, Parisi AF, et al: Safety and efficacy of diltiazem hydrochloride for the treatment of stable angina pectoris: Report of a cooperative clinical trial. Am J Cardiol 49:560-566, 1982.
2. Pool PE, Seagren SC, Bonanno JA, et al: The treatment of exercise-inducible chronic stable angina with diltiazem: Effect on treadmill exercise. Chest 78 (July suppl):234-238, 1980.

Reduces angina attack frequency*
42% to 46% decrease reported in multicenter study.[1]

Increases exercise tolerance*
In Bruce exercise test,[2] control patients averaged 8.0 minutes to onset of pain; Cardizem patients averaged 9.8 minutes ($P<.005$).

CARDIZEM®
(diltiazem HCl)

THE BALANCED CALCIUM CHANNEL BLOCKER

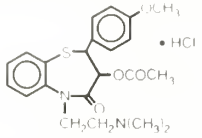
Please see full prescribing information on following page.

PROFESSIONAL USE INFORMATION

cardizem®
(diltiazem HCl)
30 mg and 60 mg tablets

DESCRIPTION

CARDIZEM® (diltiazem hydrochloride) is a calcium ion influx inhibitor (slow channel blocker or calcium antagonist). Chemically, diltiazem hydrochloride is 1,5-Benzothiazepin-4(5H)one,3-(acetyloxy) -5-[2-(dimethylamino)ethyl]-2,3-dihydro-2-(4-methoxyphenyl)-, monohydrochloride,(+) -cis- The chemical structure is



Diltiazem hydrochloride is a white to off-white crystalline powder with a bitter taste. It is soluble in water, methanol, and chloroform. It has a molecular weight of 450.98. Each tablet of CARDIZEM contains either 30 mg or 60 mg diltiazem hydrochloride for oral administration.

CLINICAL PHARMACOLOGY

The therapeutic benefits achieved with CARDIZEM are believed to be related to its ability to inhibit the influx of calcium ions during membrane depolarization of cardiac and vascular smooth muscle.

Mechanisms of Action. Although precise mechanisms of its antianginal actions are still being delineated, CARDIZEM is believed to act in the following ways:

1. Angina Due to Coronary Artery Spasm: CARDIZEM has been shown to be a potent dilator of coronary arteries both epicardial and subendocardial. Spontaneous and ergonovine-induced coronary artery spasm are inhibited by CARDIZEM.
2. Exertional Angina: CARDIZEM has been shown to produce increases in exercise tolerance, probably due to its ability to reduce myocardial oxygen demand. This is accomplished via reductions in heart rate and systemic blood pressure at submaximal and maximal exercise work loads.

In animal models, diltiazem interferes with the slow inward (depolarizing) current in excitable tissue. It causes excitation-contraction uncoupling in various myocardial tissues without changes in the configuration of the action potential. Diltiazem produces relaxation of coronary vascular smooth muscle and dilation of both large and small coronary arteries at drug levels which cause little or no negative inotropic effect. The resultant increases in coronary blood flow (epicardial and subendocardial) occur in ischemic and nonischemic models and are accompanied by dose-dependent decreases in systemic blood pressure and decreases in peripheral resistance.

Hemodynamic and Electrophysiologic Effects. Like other calcium antagonists, diltiazem decreases sinoatrial and atrioventricular conduction in isolated tissues and has a negative inotropic effect in isolated preparations. In the intact animal, prolongation of the AH interval can be seen at higher doses.

In man, diltiazem prevents spontaneous and ergonovine-provoked coronary artery spasm. It causes a decrease in peripheral vascular resistance and a modest fall in blood pressure and, in exercise tolerance studies in patients with ischemic heart disease, reduces the heart rate-blood pressure product for any given work load. Studies to date, primarily in patients with good ventricular function, have not revealed evidence of a negative inotropic effect, cardiac output, ejection fraction, and left ventricular end diastolic pressure have not been affected. There are as yet few data on the interaction of diltiazem and beta-blockers. Resting heart rate is usually unchanged or slightly reduced by diltiazem.

Intravenous diltiazem in doses of 20 mg prolongs AH conduction time and AV node functional and effective refractory periods approximately 20%. In a study involving single oral doses of 300 mg of CARDIZEM in six normal volunteers, the average maximum PR prolongation was 14% with no instances of greater than first-degree AV block. Diltiazem-associated prolongation of the AH interval is not more pronounced in patients with first-degree heart block. In patients with sick sinus syndrome, diltiazem significantly prolongs sinus cycle length (up to 50% in some cases).

Chronic oral administration of CARDIZEM in doses of up to 240 mg/day has resulted in small increases in PR interval, but has not usually produced abnormal prolongation. There were, however, three instances of second-degree AV block and one instance of third-degree AV block in a group of 959 chronically treated patients.

Pharmacokinetics and Metabolism. Diltiazem is absorbed from the tablet formulation to about 80% of a reference capsule and is subject to an extensive first-pass effect, giving an absolute bioavailability (compared to intravenous dosing) of about 40%. CARDIZEM undergoes extensive hepatic metabolism in which 2% to 4% of the unchanged drug appears in the urine. In vitro binding studies show CARDIZEM is 70% to 80% bound to plasma proteins. Competitive ligand binding studies have also shown CARDIZEM binding is not altered by therapeutic concentrations of digoxin, hydrochlorothiazide, phenylbutazone, propranolol, salicylic acid, or warfarin. Single oral doses of 30 to 120 mg of CARDIZEM result in detectable plasma levels within 30 to 60 minutes and peak plasma levels two to three hours after drug administration. The plasma elimination half-life following single or multiple drug administration is approximately 3.5 hours. Desacetyl diltiazem is also present in the plasma at levels of 10% to 20% of the parent drug and is 25% to 50% as potent a coronary vasodilator as diltiazem. Therapeutic blood levels of CARDIZEM appear to be in the range of 50 to 200 ng/ml. There is a departure from dose-linearity when single doses above 60 mg are given; a 120-mg dose gave blood levels three times that of the 60-mg dose. There is no information about the effect of renal or hepatic impairment on excretion or metabolism of diltiazem.

INDICATIONS AND USAGE

1. **Angina Pectoris Due to Coronary Artery Spasm.** CARDIZEM is indicated in the treatment of angina pectoris due to coronary artery spasm. CARDIZEM has been shown effective in the treatment of spontaneous coronary artery spasm presenting as Prinzmetal's variant angina (resting angina with ST-segment elevation occurring during attacks).
2. **Chronic Stable Angina (Classic Effort-Associated Angina).** CARDIZEM is indicated in the management of chronic stable angina. CARDIZEM has been effective in controlled trials in reducing angina frequency and increasing exercise tolerance.

There are no controlled studies of the effectiveness of the concomitant use of diltiazem and beta-blockers or of the safety of this combination in patients with impaired ventricular function or conduction abnormalities.

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. **Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
2. **Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt). Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. **Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
4. **Acute Hepatic Injury.** In rare instances, patients receiving CARDIZEM have exhibited reversible acute hepatic injury as evidenced by moderate to extreme elevations of liver enzymes. (See PRECAUTIONS and ADVERSE REACTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over profonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.

Drug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS).

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women, therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, exercise caution when CARDIZEM is administered to a nursing woman if the drug's benefits are thought to outweigh its potential risks in this situation.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences, as well as their frequency of presentation, are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%), AV block (1.1%). In addition, the following events were reported infrequently (less than 1%) with the order of presentation corresponding to the relative frequency of occurrence:

Cardiovascular:	Flushing, arrhythmia, hypotension, bradycardia, palpitations, congestive heart failure, syncope.
Nervous System	Paresthesia, nervousness, somnolence, tremor, insomnia, hallucinations, and amnesia.
Gastrointestinal	Constipation, dyspepsia, diarrhea, vomiting, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH.
Dermatologic:	Pruritus, petechiae, urticaria, photosensitivity.
Other:	Polyuria, nocturia.

The following additional experiences have been noted:

A patient with Prinzmetal's angina experiencing episodes of vasospastic angina developed periods of transient asymptomatic asystole approximately five hours after receiving a single 60-mg dose of CARDIZEM.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: erythema multiforme; leukopenia; and extreme elevations of alkaline phosphatase, SGOT, SGPT, LDH, and CPK. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

OVERDOSAGE OR EXAGGERATED RESPONSE

Overdosage experience with oral diltiazem has been limited. Single oral doses of 300 mg of CARDIZEM have been well tolerated by healthy volunteers. In the event of overdosage or exaggerated response, appropriate supportive measures should be employed in addition to gastric lavage. The following measures may be considered:

Bradycardia	Administer atropine (0.60 to 1.0 mg). If there is no response to vagal blockade, administer isoproterenol cautiously.
High-Degree AV Block	Treat as for bradycardia above. Fixed high-degree AV block should be treated with cardiac pacing.
Cardiac Failure	Administer inotropic agents (isoproterenol, dopamine, or dobutamine) and diuretics.
Hypotension	Vasopressors (eg, dopamine or levarterenol bitartrate).

Actual treatment and dosage should depend on the severity of the clinical situation and the judgment and experience of the treating physician.

The oral/LD_{50}'s in mice and rats range from 415 to 740 mg/kg and from 560 to 810 mg/kg, respectively. The intravenous LD_{50}s in these species were 60 and 38 mg/kg, respectively. The oral LD_{50} in dogs is considered to be in excess of 50 mg/kg, while lethality was seen in monkeys at 360 mg/kg. The toxic dose in man is not known, but blood levels in excess of 800 ng/ml have not been associated with toxicity.

DOSAGE AND ADMINISTRATION

Exertional Angina Pectoris Due to Atherosclerotic Coronary Artery Disease or Angina Pectoris at Rest Due to Coronary Artery Spasm. Dosage must be adjusted to each patient's needs. Starting with 30 mg four times daily, before meals and at bedtime, dosage should be increased gradually (given in divided doses three or four times daily) at one- to two-day intervals until optimum response is obtained. Although individual patients may respond to any dosage level, the average optimum dosage range appears to be 180 to 240 mg/day. There are no available data concerning dosage requirements in patients with impaired renal or hepatic function. If the drug must be used in such patients, titration should be carried out with particular caution.

Concomitant Use With Other Antianginal Agents:

1. **Sublingual NTG** may be taken as required to abort acute anginal attacks during CARDIZEM therapy.
2. **Prophylactic Nitrate Therapy** — CARDIZEM may be safely coadministered with short- and long-acting nitrates, but there have been no controlled studies to evaluate the antianginal effectiveness of this combination.
3. **Beta-blockers.** (See WARNINGS and PRECAUTIONS.)

HOW SUPPLIED

Cardizem 30-mg tablets are supplied in bottles of 100 (NDC 0088-1771-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1771-49). Each green tablet is engraved with MARION on one side and 1771 engraved on the other. CARDIZEM 60-mg scored tablets are supplied in bottles of 100 (NDC 0088-1772-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1772-49). Each yellow tablet is engraved with MARION on one side and 1772 on the other.

Issued 4/1/84

Another patient benefit product from

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WOODROW A. MYERS, JR., M.D.
State Health Commissioner

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PUBLIC HEALTH NOTES

The Importance of Breast, Testicular Self-Examinations

Much has been written about the importance of monthly breast self-examination in females, yet testicular self-examination, an equally important monthly activity for males, is rarely discussed.

Most adolescent males and females are only minimally at risk for developing testicular or breast cancer during their high school years, but these young people should be aware of the importance of monthly self-examination and of the increased risks of contracting cancer as they get older. Self-examination procedures are positive learning incentives to the adolescent who is at the peak of curiosity about his or her body and the dynamic nature of all its systems.

According to the American Cancer Society (ACS), testicular cancer—often referred to as a "young man's disease"—is one of the most common cancers in men aged 15-40 years, and accounts for 12% of all cancer deaths in this age group. It is 40 times more likely to occur among men where the testes never descend to the scrotum or descend after the age of 6. The ACS recommends that male babies be checked for this condition; it is frequently easily corrected in infancy.

Signs and symptoms associated with testicular cancer may include a small, painless lump and/or a heavy feeling in the testes with a dragging sensation in the groin. Since testicular cancer found early and treated promptly has excellent chances for cure, testicular self-examination is an invaluable activity for all males to practice.

If caught early, testicular cancer is one of the most curable of cancers; if not caught early, it is one of the most deadly, since it metasticizes quickly.

Breast cancer is by far a more common cancer, and is seen in approximately 10% of women over 35 years of age. It is not, however, the most common cause of breast lumps in women. Cysts, infection, and thickening of the milk glands as causes of breast lumps in women occur much more frequently.

Any abnormal breast lump should immediately be brought to the attention of a physician. Women should always examine their breasts within a week after monthly menstruation has ended, when the swelling is less. (Note: breast cancer occurs infrequently in the male population, but men should be aware of the possibility.)

Testicular self-examination educational programs can be conducted in conjunction with breast self-examination programs in school settings. With appropriate introductory and summary discussions, there is little, if any, reason to separate sexes for education in self-examination.

Learning about testicular and breast self-examination may also enhance the overall health awareness of adolescents and encourage discussion about important issues of adolescence, such as sexuality, mental health, alcoholism, and other similar topics.

This self-help information is important to include in late junior high school and all senior high school physical education and health education programs. Health professionals need to regularly remind the general public about both self-examination procedures through media, health fairs, in public health and private office settings. Literature and films from local chapters of the American Cancer Society may be utilized in such presentations; a teaching model for breast self-examination education is also available from the American Cancer Society.

A good time to perform the testicular self-examination is after a hot shower or bath, when the scrotal skin is most relaxed. Roll each testicle gently between the thumb and fingers of both hands—if any lumps or nodules are found, a physician should be consulted.

The shower is also an appropriate location for the breast self-exam as well. A small calendar on the bathroom wall can help to remind women of the need for monthly breast self-examination.

Prevention and early detection are always the best medicines. We must make certain that our patients are given every advantage to fight these two potentially lethal diseases.

For more information on the testicular or breast self-examinations contact the American Cancer Society or the Indiana State Board of Health's Nursing Division, 317/633-8460.

Good News from the IPRO

Communication Response Time Increased from 7 to 14 Days

TOM HANSTROM
Executive Vice-President
IPRO

IPRO IS PLEASED to announce that the response time for physicians to communicate with IPRO, on cases where additional information is requested, has been changed. In the first year of operation, we were painfully aware of the fact that the amount of response time (seven calendar days) was woefully inadequate. It often put hospitals and physicians under the hardship of having only one or two days in which to respond to our request. We recognized that the mail, dictation to be transcribed, and for the mail to be received back at IPRO, often took more than the seven days required. This not only caused a hardship on practicing physicians and hospitals, but also on IPRO. It put us in a position where, in many instances, we were asked to conduct reconsiderations on cases which would have been approved, had we received the communication in a timely fashion.

From the Indiana Peer Review Organization, 11550 N. Meridian St., Tower One, Carmel, Ind. 46032.

The rule of seven calendar days for response was not created by IPRO. We were bound, by the terms of our contract, to complete review on all cases within 15 days after review had been started. Several months ago, IPRO filed for a contract modification asking the federal government to allow us additional time to do reviews, when additional information was requested. About a month after that, Health Care Finance Administration (HCFA) came out with guidelines indicating that additional time would be granted upon request of the peer review organization. We seemed to have been caught in somewhat of a "time chamber" and it took HCFA until October to reach a final decision on our request.

We have been notified that effective immediately all requests, where additional information is needed, will be allowed 14 calendar days for response, rather than seven calendar days. We are pleased with this development, and hope that it will allow the physician an opportunity to provide adequate information to us without undue time constraints. We've worked long and hard for this modification, to assist the physician in complying with a rather stringent government regulation.

A word of caution, however. This doesn't mean that it would be appropriate for physicians to decide that they can wait until the ninth, tenth, or eleventh day to dictate something and then return it to IPRO. If this happens, then we will be no better off than before because we will be receiving responses late and we will continue to have problems. Physicians and hospitals will receive the request from IPRO two or three days into the cycle, which will allow an opportunity of five or six working days for the physician to dictate and mail to IPRO his response. In most instances, it should allow the opportunity for responses to be received by IPRO before the deadline.

We appreciate the diligence with which physicians, throughout the state, have attempted to comply with the seven-day regulation. We anticipate more favorable acceptance of the 14-day requirement, and covet your continued cooperation and assistance in administering the Medicare Peer Review program.

If you have questions or comments, please direct them to the IPRO central office. We are always willing to discuss our policies and procedures and attempt to explain the rationale behind their development and implementation.



Generics make the price easier to swallow

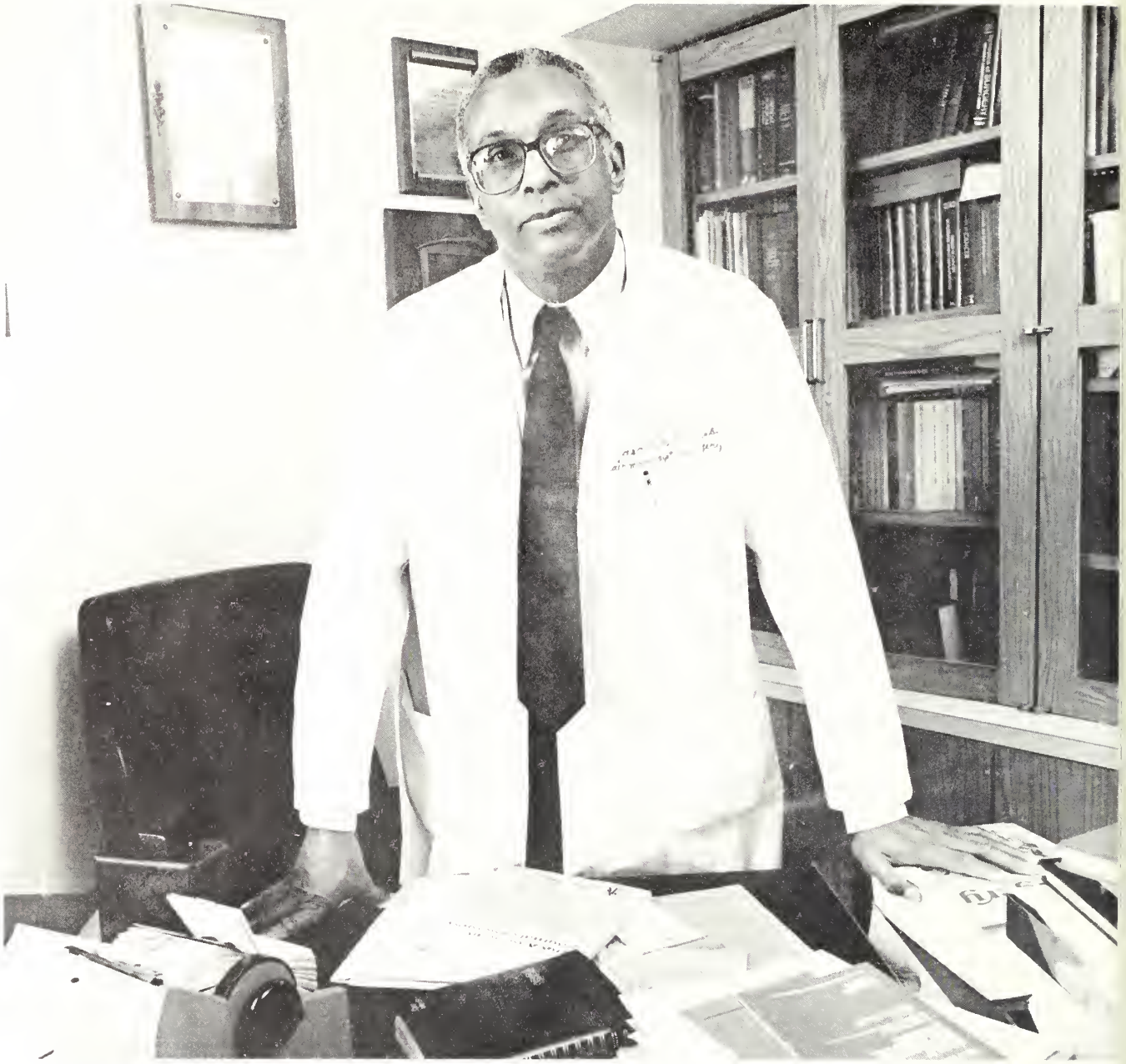
When you prescribe a generic drug rather than a brand name drug, it's probably because you've decided that your patient will benefit from the difference in prices. And at Peoples, we make sure that the price difference is the only difference, because the generic drugs we offer your patients are equivalent in quality to brand name drugs.

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PEOPLES DRUG



Dr. LaSalle D. Leffall, past president, American Cancer Society

"If everyone over 50 had checkups for colorectal cancer, the cure rate could be as high as 75%."

"If more people had colorectal cancer checkups, more people could be cured," says Dr. LaSalle D. Leffall, Jr., M.D., F.A.C.S., Professor and Chairman of the Department of Surgery, Howard University Hospital, Washington, D.C. "It's that simple. You can't cure it if you don't know you have it." But if it's detected early, the cure rate for colorectal cancer is very high. Your doctor can perform the digital and proctoscopic exams, and you take care of the simple stool blood test at home.

The present cure rate is 44%. We believe it could be at least 31% higher. Since men and women are equally affected by this disease, we urge everyone over 50 to get regular checkups at the intervals specified in the box on the right.

Fact is, there will be 130,000 new cases of colorectal cancer this year. You can help us cure 75% of them.

If you are not in the age group affected, please pass this information on to someone you know who is. The warning signs for colorectal cancer are: a change in bowel habits and blood in the stool.

People with a family history of colon or rectal cancer or ulcerative colitis are at higher risk and are urged to be doubly cautious.

Help us raise the cure rate.

Colorectal Cancer Checkup Guidelines for men and women over 50 without symptoms

- Digital exam every year
- Stool blood test every year
- Procto exam every 3 to 5 years after 2 initial negative tests 1 year apart

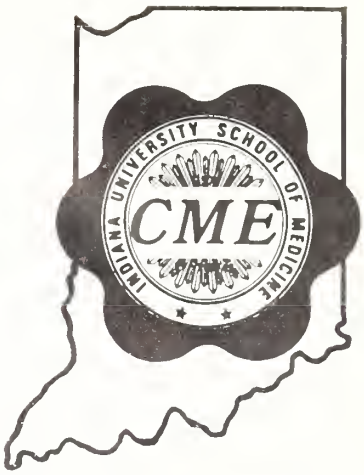
No one faces cancer alone.

AMERICAN CANCER SOCIETY®

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To obtain Category 1 credit for this month's article, complete the quiz on page 1125.



Oncogenes and the Molecular Biology Revolution in Cancer Research

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ONCOGENES ARE GENES that encode for a protein that can transform normal cells to malignant cells. The recognition of this important biological phenomenon is the result of advances in three different areas of investigation, namely, virology, chemical carcinogenesis and genetics. Although details of the role of how oncogene-coded proteins eventually effect malignant transformation are still incomplete, recent work has established certain biochemical mechanisms that can explain this role in oncogenesis. *Table 1* contains important definitions that are used in this brief review.

Cancer Has a Genetic Basis

Early studies suggested the importance of changes involving DNA within cells in the genesis of cancer. Studies with chemical carcinogens showed a correlation between the relative carcinogenicity of a particular chemical and its ability to mutate the genetic apparatus of the transformed cell. Numerous tumors have been found to contain specific chromosomal abnormalities on karyotypic analysis, many of which are characteristic for certain malignancies.

The observation that the RNA tumor viruses (Rous Sarcoma Virus, RSV) will transform cells in tissue culture led to the subsequent isolation and molecular cloning of the RSV oncogene. The Rous Sarcoma Virus and other retroviruses enter cells by the process of receptor-mediated endocytosis and, once within the cell, a portion of the RNA that codes for reverse transcriptase is activated. The viral RNA directs the synthesis of reverse transcriptase, which then turns around and synthesizes a com-

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TABLE 1
Glossary of Terms

1. GENE: a portion of DNA that encodes for messenger RNA (mRNA), which specifies the structure of a protein. There are some three billion base pairs of DNA that make up the genetic information in human cells, and a gene may contain between 70 and 30,000 base pairs of DNA.
2. **Oncogene** (onc): a gene that codes for a protein which, when produced in either normal or increased amounts, may transform a normal cell into a malignant cell.
3. **V-onc:** an oncogene carried by an RNA tumor virus.
4. **C-onc or proto-oncogene:** a gene present in animal cells whose sequence is nearly the same as that of a viral oncogene. (c-onc genes can transform cells if their products, proteins, are transcribed from mRNA at abnormally high rates. They probably have important physiological functions and are the ancestors of viral oncogenes.)
5. **Exons and introns:** Each gene consists of regions that code for mRNA (exons) that may be interspersed in tandem with intervening sequences (introns), which are nucleotide sequences that are not represented in mature mRNA.
6. **Promoter:** a region of DNA that is immediately "upstream" to the gene that determines the rate at which the gene is expressed.
7. **Retrovirus:** a virus that contains RNA as its genetic material, instead of DNA.

plementary DNA copy (cDNA) of the viral RNA. This double-stranded DNA copy is integrated into the host genome. This DNA is transcribed or copied in the cytoplasm, and some of these copies are packaged into new viral particles while others direct the synthesis of viral proteins. Numerous other viral oncogenes have been subsequently isolated based on their ability to cause sarcomas, leukemias and carcinomas in chickens, mice, rats, cats and monkeys. In these instances, there was a direct association between the ability of the virus to infect a particular species and the development of a neoplastic phenotype.

During the early 1970s, the transfer of genetic information from one cell to another and its expression was accomplished. The experimental procedure involves the transfer of DNA molecules (genes) from a donor cell to that of a recipient cell. The transferred gene is functionally incorporated into the recipient DNA. Using this methodology, it was shown that the phenotype of a cancer cell (aberrant morphology, metabolism, ability to grow under various culture conditions, and karyotype) was encoded within its DNA. Introduction of DNA molecules isolated from chemically induced neoplastic mouse cells into normal mouse cells led to malignant transformation of some recipient cells (transfection). These studies established that the information for a malignant transformation resided within the DNA of cancer cells. Subsequent experiments extended these seminal observations by showing that DNA isolated from a variety of human and non-human tumor cells behaved similarly to DNA isolated from chemically induced tumors in that they had oncogenic potential for normal recipient cells. This established the genetic basis of malignant transformation.

Using the tools of recombinant DNA technology, the specific isolation of oncogenic segments in tumor cell DNA (oncogenes) was accomplished by the transfection assay. The transforming capability of human bladder carcinoma cells was localized to a single DNA segment of about 5000 nucleotides. Following the cloning of this segment, it was found that this gene contained all the information necessary to transform normal cells into malignant cells and was, by definition, an oncogene.

The Origins of Oncogenes

The detection of transforming genes in human bladder carcinoma cells immediately raised the question as to the origin of these oncogenes. Were they foreign genes that had been introduced into the cancer cell, or did they arise from a pre-existing cellular sequence that normally is suppressed but subsequently activated during tumorigenesis? Attempts to identify a viral etiology for human tumors were unproductive in the majority of cases, even though this theory apparently "made sense" since it was well known that viruses caused cancers in non-human species. However, when a radioactive cDNA probe that was complementary to the *src* gene (obtained from the RNA from RSV) was incubated with cellular DNA from normal chickens, the viral cDNA hybridized with chicken DNA. This meant that the DNA of normal chickens contained a copy of the *src* gene.

The next question was: which came first? Was the cellular gene derived from the viral gene, or did the cellular gene come first? The answer came from the observation that normal genes contain intervening sequences (introns) that interrupt the coding sequence of genes. Following transcription of the gene into RNA, these introns are removed and the remaining exons are spliced to give a continuous coding of the functional RNA sequence. In contrast to cellular genes, retroviral genes contained no intervening sequences, while the cellular *src* gene did contain intervening sequences. This meant that the *src* gene must have originated in the cell's genome. Such an antecedent normal gene is called a proto-oncogene. (This implies that this normal gene can express oncogenic activity when appropriately altered.)

Therefore, the oncogene must have been a normal cellular gene that was acquired by the virus through the process of recombination.

Proto-oncogenes have been identified in nearly every branch of the evolutionary tree. Since these structures are tightly conserved in widely separated species, this conservation suggests that these genes must perform important functions in the normal cells. Their expression in most normal cells is at very low levels, although some oncogene mRNA's are expressed at high levels early in embryonic life and are then turned off. Other oncogenes are expressed only in certain cells, e.g., hematopoietic cells. These observations have led to the notion that these oncogenes function during certain stages of differentiation and also induce cell proliferation at critical stages in development. Since each gene has a promoter "upstream" in the coding sequence, it is felt that the promoters are silenced when the normal cellular genes become inactive. However, any oncogenic stimulus can lead to activation of the oncogene which could lead to recapitulation (during later life) of the same function that it produced during embryonic life, thereby stimulating abnormal cell division.

Proto-oncogenes may become activated by non-viral mechanisms during tumorigenesis in humans. The evidence to suggest this possibility came from studies which identified proto-oncogenes that were associated with animal retroviruses originally, but that were also found to be activated in human tumors having no viral association. Each gene has a regulatory or "promoter" region upstream that modulates the expression of the structural portion of the gene in response to various developmental and physiological stimuli. The expression of the structural portion of the gene results in coding of the amino acid sequence of a protein. Therefore, alterations in the regulatory portion of the gene may lead to inappropriately high levels of a growth-inducing protein, while structural mutations could lead to the synthesis of a protein having an aberrant structure and/or function (*Table 2*).

TABLE 2
Mechanisms of Oncogene Activation

I. Retroviral Activation
A. Insertion of viral genome proximal to proto-oncogene of infected cells, leading to excess oncogenic mRNA produced.
B. Virus picks up cellular proto-oncogene which is incorporated into viral genome.
  (i) viral RNA-oncogene RNA hybrid produced in excess.
  (ii) rearrangement of oncogene within RNA hybrid and virus packaged for exit from cell. This virus-containing oncogene in viral genome can infect another cell.

II. Non-Viral Oncogene Activation (Radiation or Chemical Carcinogen)
A. Point mutation of proto-oncogenes leading to abnormal oncogene product formed.
B. Altered regulation of oncogenes by
  (i) Translocation involving a region that regulates expression of proto-oncogene; this chromosomal rearrangement leads to expression of oncogene products at higher levels in spite of no net increase in number of proto-oncogenes;
  (ii) Amplification of the proto-oncogenes resulting in a net increase in number of proto-oncogenes; on karyotypic analysis these are visualized within the chromosome as homogenously staining regions (HSR), or extra chromosomally as double minute chromosomes.

Activated Oncogenes May Be Structurally Changed

Support for the idea that a mutation in the structural portion of an oncogene is important in carcinogenesis came from study of a human bladder carcinoma cell line. Using the transfection assay, the human oncogene responsible for malignant transformation was isolated. Surprisingly, this human oncogene was the cellular counterpart of an earlier described oncogene from rats (*c-ras*). Since it was found that all normal cells contained the *c-ras* gene, it suggested that the *c-ras* gene in the human bladder carcinoma cell must be abnormal. This was subsequently found to be correct when sequence analysis of the purified oncogene revealed a point mutation where a single nucleotide (guanidine) in the *c-ras* gene was substituted by thymidine, thereby changing glycine to valine.

Proof that this mutation could lead to carcinogenesis came from an elegant study whereby a 350-base pair sequence of the patient's *c-ras* gene that contained the substituted base was introduced into a corresponding sequence of a normal *c-ras* gene. This modification of the normal *c-ras* gene led to the transformation of recipient cells in the transfection assay. This mutant gene was not transcribed at a higher level as judged by the level of mRNA in the transfected cell. Since the normal function of the *ras* protein is not known, we can only speculate that the protein derived from the mutation (a kinase) may act on an abnormal substrate or may overphosphorylate a normal substrate. In any event, the mutation of the *c-ras* gene produces a condition in which the transcription of this mutant gene at normal rates leads to cancer. It is likely that such point

mutations occur randomly. If the mutation is at a critical site, the result is carcinogenic. On the other hand, point mutations at noncritical sites may be functionally silent.

Regulatory Changes in Oncogene Expression

Alterations in gene regulation may lead to activation of cellular proto-oncogenes. The prototype for this mechanism is those oncogenes of the *myc* type where the amount of the encoded protein is altered. This is observed clinically in Burkitt's lymphoma, whereby, following reciprocal exchanges of large chromosomal segments between two non-homologous chromosomes (8_q 14_q^+ translocation), the regulatory sequence derived from an immunoglobulin gene is substituted for the regulatory sequence of the *myc* proto-oncogene. This results in activation of the *myc* gene. A second distinct mechanism of abnormal *myc* regulation is by gene amplification, wherein 50-100 copies or more of the *myc* gene may be present. This results in a proportional increase in the level of the *myc* encoded protein. The end result of both mechanisms of abnormal oncogene regulation is excess oncogene expression. Translocation of genetic material or multiple DNA copies may lead to excess production of oncogene-encoded proteins, including homogeneously staining regions or double minute chromosomes. Other mutational changes that activate oncogenes may not result in such karyotypic abnormalities, since they are minor perturbations in the overall structure of the gene.

Oncogenes May Work in Harmony on Behalf of the Cancer Cell

To continue to proliferate, tumor cells must possess advantageous traits over normal cells, and there must ideally be different traits that confer to a certain cell the properties of the neoplastic phenotype. Theoretically, this requirement could be optimized if different oncogene protein products, each having a distinct function, were to act in unison for the welfare (survival advantage) of the neoplastic cell. Early studies did indeed confirm that in certain tumor cells, there were independently activated oncogenes. These observations were tested for their functional significance by gene transfer experiments and found to be consistent with the hypothesis of collaborating genes. For instance, the *ras* oncogene exerts effects on (1) cell shape, (2) the cell's dependence on various growth factors; (3) the cell's ability to grow in the absence of attachment to its normal substrate, and (4) inducement of cells to secrete various growth-stimulating factors. On the other hand, the *myc* oncogene exerts its effects in (a) immortalizing cells in tissue culture, and, (b) being extremely responsive to growth factors present in the growth medium. Therefore, the *ras* and *myc* oncogene effects complement one another on behalf of the transformed cell. It is likely that further studies will reveal more complexities in the concerted effects of two or more oncogenes on the neoplastic cell.

Oncogene Products—The Early Years

Since oncogenes play such a pivotal role in cellular proliferation, it is likely that oncogene products have a major effect at key points in the complex regulatory pathways involving cell growth. Studies directed at identifying the functional characteristics of the oncogene product have revealed some insight into this hypothesis. The best characterized oncogene-coded protein is the 60,000 molecular weight protein (named also pp60) which is encoded by the *src* oncogene. The *src* protein is a tyrosine kinase that can enzymatically transfer a phosphate group from ATP to the tyrosine moieties of many target proteins. What is unique about this pp60 is that most normal kinases transfer phosphate groups from ATP to serine and threonine residues on target proteins. The question, therefore, is: Does this phosphorylation of numerous target proteins uniquely on tyrosine moieties (compared to serine and threonine residues normally) lead to changes in any functional characteristics of these proteins? Since we do not know the complex mechanisms governing cell growth, this answer is not yet available.

In addition to the *src* oncogene, nine other different oncogenes have tyrosine kinase activity. In contrast to the *src* oncogene, normal *ras* proteins all bind guanidine di- and triphosphates (GDP and GTP). The abnormal versions of the *ras* oncogene-coded protein binds both GDP and GTP, but have a decreased ability to remove the phosphate from GTP to convert it to GDP. Again, the question is: Does this reduced GTP-ase activity account for the oncogenic potential of the *ras* protein? It is anticipated that answers to these crucial questions will be forthcoming.

Oncogenes Can Disturb Growth Regulation

All normal cells divide only after stimulation by certain growth factors that are secreted in response to developmental stimuli or following recovery from pathological injury (liver regeneration, would healing, etc.). Neoplastic transformation, on the other hand, results in the ability of the cancer cell to proliferate independent of these exogenously supplied growth factors. Therefore, one would predict that study of the interaction between oncogenes and cell growth factors would be a fruitful area for investigation. Recent work has shed some insight on how oncogene activation within a cell may lead into auto-stimulation of the cell, resulting in autonomous growth (*Figure 1*).

A potential consequence of oncogene activation is the deregulation of genes that encode for secreted growth factors. This could be the result of direct stimulation of the growth factor gene by the oncogene protein which would produce and respond to excess growth factor. Alternatively, the oncogene product itself could be a growth factor and

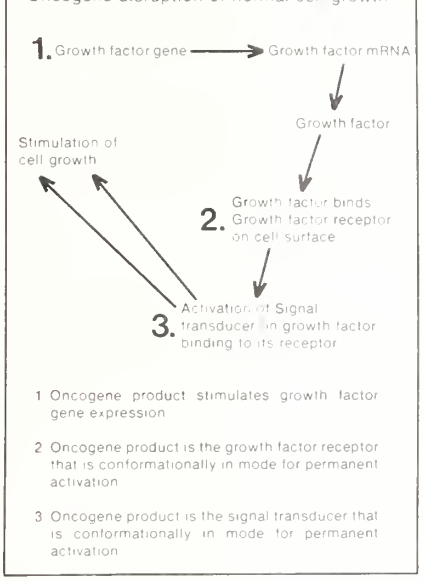
lead to auto-stimulation of the cell. These two mechanisms in growth factor deregulation could result in independence from exogenous growth factors, since the growth factor production was by the cell itself (autocrine regulation). Examples of growth factor deregulation are *sis* oncogene activation, which allows cells to escape from their normal dependence on platelet-derived growth factor (PDGF), and *src* oncogene activation, which leads to activation of other cellular genes that are responsible for growth factor secretion.

Growth factors bind to receptors on the surface of target cells; stimulatory signals then are transmitted to the interior of the cell. If there is a mutation in the gene for the growth factor receptor such that the receptor sends stimulatory signals into the cell in the absence of the binding of the growth factor, it would lead to a continuous stimuli for growth. Such a situation has been found with the *erb-B* oncogene, which is a mutated version of the epidermal growth factor gene. Along the same lines, it is speculated that other oncogene-coded proteins may interfere with the stimulatory signals generated following the binding of certain growth factors to their respective receptors by augmenting or amplifying this signal. Such a mechanism also could lead to autonomous growth of the affected cell.

Much more work is needed before we understand the detailed mechanism of action of oncogene products. It is evident, however, that the discovery of oncogenes has allowed us to unify viral, chemical and genetic theories of cancer. Oncogenes have allowed us to intelligently ask questions about specific mechanisms in cancer.

FIGURE 1

Oncogene disruption of normal cell growth



Clinical Oncology and Oncogenes

Recently, it has been shown that amplification of the *N-myc* oncogene is correlated with the stage of the disease in childhood neuroblastoma. This characteristic amplification of the *N-myc* oncogene may, therefore, be used to determine appropriate chemotherapy for the more advanced stages of the disease. It is likely that more detailed study of other tumors may lead to a better understanding of the biology of the tumor with respect to activated oncogenes. This may have diagnostic or prognostic ability. From a therapeutic standpoint, understanding the molecular mechanisms involved following the activation of oncogenes in tumors will allow us to develop a new generation of anticancer agents. Current chemotherapeutic agents are relatively inefficient and non-specific in their actions, resulting in toxicity to normal cells. Since certain tumor-associated oncogene-coded proteins are quantitatively distinct from their physiological (proto-oncogene) counterparts in normal cells, it is likely that these may be targeted by novel specific chemotherapeutic agents while sparing normal cells. The characterization of collaborating oncogenes and their products may identify instances where a combination of specific novel agents can be directed against an individual tumor, while in other instances involving a mutational change in the oncogene, only a single agent may suffice. This will, it is hoped, significantly reduce the incidence of non-specific toxicity in cancer chemotherapy. In the future, oncology will undoubtedly be understood at the molecular level, resulting in better understanding of the natural history and treatment of cancers.

ADDITIONAL READING

1. Yunis JJ: The chromosomal basis of human neoplasia. *Science*, 221:227, 1983.
2. Bishop JM: Cellular oncogenes and retroviruses. *Ann Rev Biochem*, 52:301, 1983.
3. Tabin CJ, Bradley SM, Bargmann CL, *et al*: Mechanisms of activation of a human oncogene. *Nature*, 300:143, 1982.
4. Land H, Parada LF, Weinberg RA: Cellular oncogenes and multistep carcinogenesis. *Science*, 222:771, 1983.
5. Hunter T: The protein of oncogenes. *Sci Am*, 251(2):70, 1984.
6. Weinberg RA: A molecular basis of cancer. *Sci Am*, 249:126, 1983.

Skin Diseases: Current Concepts, Therapy

6. INFESTATION AND BACTERIAL INFECTION

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Michigan City

THE ADVENT OF antibiotics 40 years ago revolutionized the incidence as well as the treatment of infections. Specific bacterial infections that had previously been common became progressively more rare. Parasitic infestations, however, do not respond to antibiotics, and their incidence has not altered appreciably. After World War II scabies remained endemic for 20 years and only sporadic cases were seen, but since 1974 there has been another pandemic of scabies, higher standards of living and cleanliness notwithstanding.

Scabies is caused by the acarus Sarcoptes scabii, and new cases have an incubation period of about one month.[1] The lesions, except for burrows, are not pathognomic, but distribution in the finger webs, wrists, elbows, abdomen, inner lower axillae and breasts or genitalia is suggestive. The acarus can and should be demonstrated in scrapings from the burrows, mounted in mineral oil, and examined under a microscope scanning lens.

Treatment with 1% lindane (gamma benzene hexachloride, GBH) lotion (Kwell, Scabene) is very effective, provided that it is applied correctly. The cure rate is 98% after application for 12-24 hours, 96% after a six-hour application, but only 82% after a two-hour one.[2]

After a hot bath, the lotion should be applied to the entire skin from the neck down, sparing only the face and scalp, which are not affected in scabies. The chemical must be left on the skin, preferably 24 hours, before the patient takes another bath. Then, the bed sheets and all linen and towels should be changed and washed. The entire family, whether apparently infested or not, must be treated at the same time. The itching will persist for a few days but the treatment need not be repeated.

Kwell is safe when applied to mature skin,[3] but there is some absorption. Three days after 12-hour application to the entire body, the plasma level of lindane in adults is about 10ng/ml.[4] Kwell is only completely contraindicated for application to premature infants, in whom dangerous absorption could occur. By extension, for medical-legal reasons, lindane should be avoided for subjects younger than one year of age, and for older children weighing less than 50 lbs. Lindane insecticide, which has a higher concentration of GBH, must never be used for application.[5]

Eurax (10% crotamiton cream) is almost equally as effective as 1% lindane. Little is known about systemic absorption of this compound. Alternatively, especially for the youngest infants, 5% sulfur ointment can be used, and is eventually effective. It may be prudent to clothe infants completely after any of these applications, so that the child cannot suck or lick the skin. The concomitant itching of scabies may optionally be treated by systemic corticosteroids, except in the presence of secondary infection, in which case a systemic antibiotic should be given instead.

Pediculosis of the scalp has an incidence of 8% in children, being more common in girls than boys, and in Whites than Blacks. The incidence is highest among children of the first grade and in special education, decreasing progressively to the lowest incidence in the sixth grade.[6] Pediculosis capitis is not rare in adult women, however, and usually manifests as excoriations of the nape of the neck. The lice are not easily seen but the nits are attached to the hair shafts.

The incidence of pediculosis pubis is even twice that of scabies. The sharp increase in the last few years is thought to be related to the sexual revolution. In these cases the lice are easily seen.

Pediculosis capitis and pubis are both treated by either 0.5% malathion in isopropyl alcohol (Prioderm Lotion), or 1% lindane (Kwell Lotion or Shampoo), or 0.3% pyrethrins synergized with 3% piperonyl butoxide (RID, Vonce, RC Shampoo). The lotion forms of malathion or lindane, applied to the dry hair until it is moistened, and allowed to remain for 12 hours, are 100% effective. The pyrethrins or Kwell shampoo are only applied for 4 to 10 minutes, and are also 100% pediculocidal. However, they may not be ovicidal in less than one hour, so it is customary to repeat these applications after seven days, after which all cases are cured.[7-10] A-200 Pyrinate is not recommended because corneal damage,

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scarring and ulceration have been reported from use of this product, which contains denatured kerosene. Mercurial oxide ophthalmic ointment may be safer than any of these for infestations of the eyelashes, which occasionally occur.

The excoriations of scabies and pediculosis are often secondarily infected, as are cutaneous ulcers, lesions of blistering diseases, burns and exudative cases of dermatitis. In the treatment of secondary cutaneous infection it is important to eliminate the primary cause of the break in the skin. In decubitus ulceration, the patient's weight must obviously be redistributed off the ulcer. In the case of stasis ulceration the venous stasis must be eliminated. This is usually secondary to previous thrombophlebitis with consequent destruction of the venous valves. The vein recanalizes but the valves do not regenerate.

If the primary condition is left untreated, however, the only effect of antibiotics will be to change the flora, from bacteria sensitive to the antibiotic, to organisms resistant to it. This consideration is especially important in diabetic trophic ulceration, in which adequate debridement is absolutely essential, to prevent possible Gram-negative bacteremia or staphylococcal toxic shock, and to obviate necessity for amputation.

For stasis ulcers, an adhesive bandage, either elastic (Elastoplast, Ace Adhesive, Flexoplast) or inelastic (Dome-paste), impregnated with glycerin and gelatin, can be wound firmly around the foot and leg from the toes proximally. The dressing may be left in place for three to seven days, then removed and a fresh adhesive bandage reapplied, this being continued until re-epithelialization has occurred from the edges of the ulcer. This treatment requires no special application to the ulcer itself.

Topical antibiotics may be applied. Neomycin and gentamicin (Garamycin) are two of those available as cream or ointment. They both sometimes cause allergic eczematous contact dermatitis. Polysporin ointment, a broad spectrum antibiotic mixture of bacitracin and polymixin B, is preferable for two reasons, namely because these two antibiotics are not sensitizing and are not ordinarily used systemically, being toxic only by mouth or injection. Neomycin need be used only if Proteus is the infecting agent.

These preparations, or 1% silver sulfadiazine cream (Silvadene), or 10% benzoyl peroxide gel, can be applied to cutaneous ulcers. They increase the rate of re-epithelialization by 21-33%.[11,12,13] Ointments of proteolytic enzymes, namely Travase (enzymes of Bacillus subtilis), Panafil (papain), Elase (fibrinolysin and deoxyRNAse), Granulex aerosol (trypsin), Biozyme-C and Santil (collagenase) may be applied. These enzymes do not affect living cells.

If the ulcer is considerably exudative, sterile hydroactive polysaccharide granules can be applied, filling the ulcer to the level of the surrounding intact skin. These are available as Debrisan and DuoDERM. Their value in the treatment of ulcers has not been established, but they form a protective gel with exudative fluid. This action is similar to that of the flexible hydroactive dressings DuoDERM, Tegaderm, Bioclusive, and Vigilon. These can be applied over the ulcer and surrounding skin, as they are permeable to oxygen and water vapor but not to liquids or bacteria. They are left on for a few days, during which time the normal transepidermal water loss maintains a moist environment conducive to reepithelializing the ulcer.[13]

Many cutaneous infections are caused by the gram-negative, coliform bacteria, Proteus and Pseudomonas. Broad spectrum antibiotics such as ampicillin, amoxicillin, tetracycline, a cephalosporin or nafcillin should be given if there is any possibility of gram-negative septicemia. Gentamycin, tobramycin, streptomycin or chloramphenicol may be required, but they can be toxic when used systemically.

Primary purulent infections of the skin include folliculitis and furunculosis, caused by coagulase-positive staphylococci; cellulitis and erysipelas, caused by hemolytic streptococci; and impetigo, a primary staphylococcal infection often secondarily infected by the streptococcus.

As in any case of infection, the causative organism should be isolated in culture from a swab of exudate, crust or pus. To determine the sensitivity to antibiotics of an isolated pathogen requires about 48 hours. In the meantime penicillin or erythromycin should be given if the infecting organism is likely to be a group A hemolytic streptococcus; penicillinase-resistant penicillin for possible staphylococcus; or amoxicillin for enterococci.

Antibiotics should be administered systemically in order to reduce contagious spread, treat deep infection and prevent acute glomerulonephriitis, which has been known to occur as an aftermath of streptococcal pyoderma. A single injection of benzathine penicillin suspension (Bicillin C-R), 1,200,000 units for adults, 600,000 units for children, provides protection for 10 days against the streptococcus.

The coagulase-positive staphylocci that cause bullous impetigo are usually resistant to penicillin. One of the cephalosporins, or a synthetic derivative of penicillanic acid resistant to penicillinase, should be chosen in this disease. Either cloxacillin or dicloxacillin is recommended.

To prevent spread of these primary infections of the skin, an antiseptic preparation should be used to cleanse the skin in the vicinity of the infection. Povidone-iodine 0.75% (Betadine), 3% hexachlorophene (pHisoHex), or 4% chlorhexidine gluconate (Hibiclens) may be used. Of these, Hibiclens is effective[14] and neither irritating nor toxic.

Other specific infections involving the skin are treated systemically as follows:

Syphilis, early: Bicillin L-A, 2.4 million units weekly for two weeks.

Late and neurosyphilis: Bicillin-LA, 2.4 million units weekly for three weeks. Patients allergic to penicillin: Erythromycin or tetracycline, 500mg q.i.d. for 15-20 days.

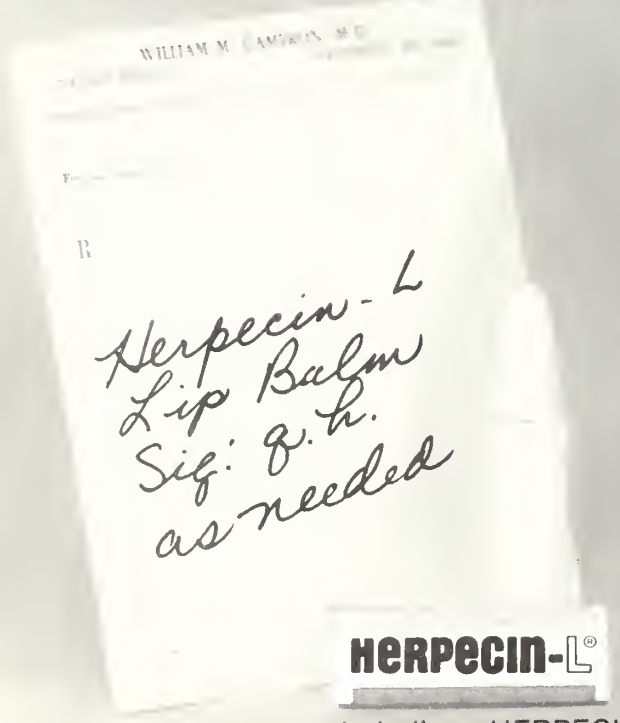
Darkfield-negative genital ulcers (chancroid, lymphopathia venereum and granuloma inguinale): erythromycin 500mg q.i.d., tetracycline 500mg q.i.d., Septra-DS b.i.d., trimethoprim 100mg t.i.d., or a sulfonamide 1gm q.i.d. for three weeks.

Mycobacterium marinum (balnei) responds to the tetracyclines, 1.5-2gm daily for up to 16 weeks. Mycobacterium tuberculosis responds to isoniazid, 300mg daily. Other species, M. kansai and avium, are less susceptible and require a higher concentration of isoniazid for inhibition of growth.

REFERENCES

1. Burkhart CG: Scabies, an epidemiological reassessment. *Ann Internal Med*, 98:498-503, 1983.
2. Taplin D, *et al*: A comparative trial of three treatment schedules for the eradication of scabies. *J Amer Acad Dermatol*, 9:550-554, 1983.
3. Kligman AM: Percutaneous absorption and gamma benzene hexachloride (gbh) agents. *Cutis*, Sept. 1981 Supplement.
4. Hosler J, *et al*: Topical application of lindane cream (Kwell) and antipyrine metabolism. *J Invest Dermatol*, 74:51-51, 1979.
5. Kramer MS, *et al*: Operational criteria for adverse drug reactions in evaluating suspected toxicity of a popular scabicide. *Clin Pharm Therapeut*, 27:149-155, 1980.
6. Orkin M, Maibach HI: *Lice infestation update*. New York: Marcel Dekker Inc. 1983.
7. Malathion for treatment of head lice. *Med Letter*, 25:30-31, 1983.
8. Robinson DH, Shepherd DA: Control of head lice in school children. *Current Therapeut Research*, 27:1-6, 1980.
9. Nonprescription alternative to Kwell for pubic lice. *Derm Capsule & Comment*, Dec. 1979.
10. Smith DE, Walsh J: Treatment of pubic lice infestation. *Cutis*, 26:618-619, 1980.
11. Lookingbill DP, *et al*: Bacteriology of chronic leg ulcers. *Arch Dermatol*, 114:1765-1768, 1978.
12. Geronemus RG, *et al*: Wound healing. *Arch Dermat*, 115:1311-1314, 1979.
13. Transparent wound dressings. *Med Letter*, 103-104, 1984.
14. Peterson AF, *et al*. Comparitive evaluation of surgical scrub preparations. *Surg Gyn Obst*, 146:63-65, 1978.

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Peripheral Vascular Disease in a Prison Population

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Abstract

Several factors contribute toward the earlier onset of peripheral vascular disease in a prison environment. Excessive cigarette smoking, chronic underlying stress, lack of sufficient exercise and a high carbohydrate and fat diet are endemic in a prisoner's daily life. Efforts should be made to educate this group of patients, as well as the general public, regarding the health consequences when one leads such a life-style. Preventive medicine would have a very significant impact in reducing the incidence of peripheral vascular disease in any patient population group, since all of the above factors are clearly associated with arteriosclerosis.

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Acknowledgment: Mrs. Catherine Garrabrant for patient chart construction.

CERTAIN CONDITIONS which are detrimental to anyone's health and long life are created and some are already existent in a prison environment. However, by the very nature of prolonged confinement, the factors to be discussed are difficult to change without a radical change in prisoners' life-style.

Cigarette smoking, diabetes, hypertension, dietary habits and certain hereditary tendencies are detrimental to the cardiovascular system and help to accelerate the onset of peripheral vascular disease in any patient population. Having an opportunity to care for prisoners with peripheral vascular disease, I have been impressed by the early onset of symptoms and advanced peripheral vascular disease in this particular patient population. The usual onset of peripheral vascular problems is seen in patients who are in their fifth decade or older. However, in the prison population, there is a tendency for the onset of peripheral vascular disease to be much earlier, occurring in the patient's third and fourth decades of life.

This early onset of arteriosclerosis in prisoners is very impressive and significant. However, when one examines the pattern of daily prison life, there are certain predisposing factors which may very well accelerate the onset of peripheral vascular disease. The following conditions are prevalent in a prison atmosphere:

1. Excessive cigarette smoking which tends to be more pronounced when one is confined with nothing else to do.
2. The presence of chronic underlying stress and anxiety.
3. Primarily sedentary life and lack of sufficient exercise.
4. A high carbohydrate and a high fat diet.

It is well known that arteriosclerosis is clearly associated with all of the above. Heavy cigarette smoking helps to produce arterial wall injury by four different mechanisms. They are:

1. Tobacco increases platelet activity which causes platelet deposits on vessel walls and leads to the development of plaques.
2. The oxygen supply to the vessel wall is diminished by 30% or 40% due to the binding of carbon monoxide to hemoglobin. It has been shown experimentally that arterial walls with diminished oxygen supply develop arteriosclerosis at a much more rapid rate than would otherwise occur.
3. Nicotine causes vasospasm and increases blood pressure, which has an adverse effect on the arteries.
4. Many people have an allergy to tobacco which results in the combination of antigen-antibody complexes; these have been shown to deposit in the arterial wall and cause inflammation, which is the forerunner in some instances to arterial disease.

In contrast, the incidence of peripheral vascular disease is greatly reduced in a population that does not smoke, is not exposed to an excessive amount of stress, gets plenty of exercise and has a low fat, low carbohydrate diet.

The accompanying patient chart (*Fig. 1*) summarizes peripheral vascular disease in several Indiana State Prison inmates. It helps illustrate the tendency of early onset of arteriosclerosis in this group of patients.

A total of 11 separate peripheral vascular procedures have been performed on eight individual patients. As

CASE NO.	AGE	SEX	HT.	WT.	SMOKING HISTORY	DIABETIC HISTORY	CARDIAC HISTORY	BUN	CREATI-NINE	CHOLES-TEROL	TRIGLY-CERIDES	ARTERIOGRAM FINDINGS	SURGICAL PROCEDURE PERFORMED
1.	45	M	5'10½"	209	1½ PPD	+	+	14	1.0	185	155	Aorto-iliac occlusive disease	Endarterectomy of abdominal aorta and aortobifemoral bypass using dacron graft.
2.	36	M	5' 8"	175	1½ PPD	-	-	14	1.1	245	205	Stenosis of right common iliac artery	Endarterectomy of right common iliac artery.
*3.	39	M	5' 6"	170	1 PPD	-	+	15	1.3	320	480	Right superficial femoral artery occlusion	Right fem-pop bypass using reverse saphenous vein graft (below the knee)
*4.	40	M	5' 6"	168	1 PPD	-	+	17	1.3	297	245	Left superficial femoral artery occlusion	Left fem-pop bypass using reverse saphenous vein graft (below the knee)
**5.	37	M	5'11"	185	2 PPD	+	+	20	1.1	240	130	Aortoiliac occlusive disease	Aortobifemoral bypass using dacron bifurcation graft.
**6.	37	M	5'11"	175	2 PPD	+	+	16	1.2	257	90	Left superficial femoral artery occlusion	Left fem-pop bypass using a composite PTFE/vein graft (below the knee)
**7.	37	M	5'11"	175	2 PPD	+	+	16	1.2	257	90	Right superficial femoral artery occlusion	Right fem-pop bypass using a composite PTFE/vein bypass graft (below the knee)
8.	35	M	5'11"	195	2 PPD	-	-	16	.9	177	160	Occlusion of left superficial femoral artery	Left fem-pop bypass using reverse saphenous vein graft (above the knee)
9.	70	M	6'	150	2 PPD	-	+	24	1.2	185	110	Abdominal aortic aneurysm and occlusion of right superficial femoral artery	Bilateral lumbar sympathectomy. Resection of abdominal aortic aneurysm, endarterectomy of abdominal aorta and aortobifemoral bypass using dacron bifurcation graft
10.	44	M	5'4"	145	2 PPD	-	+	17	.8	265	140	Occlusion of old left dacron limb of dacron Y graft	Thrombectomy of old dacron graft, left dacron graft to distal left popliteal artery bypass using PTFE/graft.
11.	43	M	5'6"	164	2 PPD	-	-	14	1.2	210	45	Complete occlusion of abdominal aorta below renal artery. Left renal artery was patent only	Endarterectomy of abdominal aorta and aortobifemoral bypass using dacron Y graft.

*Same patient
**Same patient

FIGURE 1: Summary of 11 peripheral vascular procedures performed upon eight Indiana State Prison inmates.

can be seen from this study, two of the patients are diabetics (25%) and all eight patients (100%) are cigarette smokers. It is interesting that all but one patient (87.5%) are in their third or fourth decade of life. None of the patients was obese, and five patients (62.5%) had EKG evidence of arteriosclerotic heart disease. The renal function was normal in all of the patients. Cholesterol and triglycerides were within normal limits in all patients except one (87.5%); however, fractionation of the high and low density lipoproteins was not available for this study.

Summary

The prevention of peripheral vascular disease should be the major topic on the medical agenda for the 1980s and 1990s. Cardiovascular disease is the major killer in the United States and has been one of the main contributing factors for the high cost of medical care.

Medical research has developed sophisticated peripheral vascular and cardiac bypass techniques. Now microvascular surgery is a reality and mechanical heart transplants are on the horizon. The time has come to place more emphasis on the prevention of peripheral vascular and cardiac disease, which continue to be the number one killers in the United States. As a beginning, our nation's hospitals should encourage both patients and staffs to stop smoking. Ideally, smoking should be permanently eliminated on all hospital premises, whereby the medical staff, the patient population and all other hospital employees would abstain from smoking. Such action would improve the environment in which we work and also help those individuals stop smoking who are trying to stop and need some motivation to do so. Our alcoholic rehabilitation units should also institute such a policy. Smoking is so prevalent and intense there that the environment in which the staff and patients live and work is actually hazardous to their health.

Elimination or reduction of anxiety and stress should also be researched and encouraged in our hospitals and Care Units. Physical fitness needs to be stressed more and encouraged for all, especially the middle-aged group of patients. One step in that direction would be to encourage the use of stairs, rather than elevators, in hospitals as well as in any other public buildings. This is especially true when one sees someone taking an elevator to go one flight of stairs up or down. The use of elevators should be encouraged only for those who have physical impairments and not for the healthier population who would benefit from walking up one or two flights of stairs rather than riding up.

Daily meals in hospitals and other institutions should be more dietetic, whereby vegetable and fruit meals are promoted and encouraged. Attempts should be made to reduce the high carbohydrate and fatty foods from patient diets in hospitals as a whole. By doing so, patients would be encouraged to change their dietary habits and diminish the carbohydrates and fats in their diet.

The old phrase, "An ounce of prevention is worth a pound of cure," certainly applies to peripheral vascular disease. Public awareness of predisposing factors and more active hospital involvement in patient and general public education is imperative. A giant step forward would be to eliminate cigarette smoking in all of our nation's hospitals and encourage "no smoking" policies in other state and federal institutions. Physical fitness programs should be adopted and encouraged in all institutions. Changing our patients' and public's dietary habits is a monumental task but would be a big step in the right direction. The use of carbohydrates and fat should be curtailed as much as possible in favor of vegetables and fruits in the diet. All of the preceding suggestions would complement each other in decreasing the incidence of arteriosclerosis, not only in the prison population but in all other individuals who are willing to change their life-style in order to achieve a healthier and a longer life.

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The Head Injury-Coma Arousal Center

A New Program for the Care of Brain-Injured Patients

KARL L. MANDERS, M.D.
Indianapolis

OVER THE PAST YEAR and a half, University Heights Hospital, a 150-bed acute and primary care hospital located on the south side of Indianapolis, initiated a unique program for the care of the brain-injured individual who has not regained consciousness after the immediate medical and/or surgical treatment have been completed. In the past, this type of patient, not being acceptable for admission into a rehabilitation unit because of lack of cognitive skills, would be relegated to a nursing home or discharged to home care which provided little if any stimulus for further neurological recovery. These patients remained in a vegetative state and functional return was usually minimal.

The Coma-Arousal Center was conceived at University Heights Hospital to overcome environmental deprivation caused by brain damage, to stimulate vigorous sensory input to assist the patient in regaining consciousness, to prevent complications seen frequently in the bedridden individual, and to assist the patient in attaining a status of medical stability and an increased level of consciousness that would allow admission into a rehabilitation unit leading to the highest level of independence possible. The program is intended to fill the crucial gap between immediate acute care and long-term rehabilitation so that patients can achieve sufficient recovery to be subsequently transferred to a rehab-oriented facility.

The etiology of coma may include asphyxiation, near drowning, anesthetic complications, vascular injuries as well as head trauma. We feel strongly that the chances of improvement are enhanced if the individual treated is in the younger age group, usually in the early forties or below, and as close as possible to the time of injury. The best results have usually occurred when the treatment was begun at least three or four months post-trauma.

The patient admitted may or may not be medically stable; however, care is undertaken in an intermediate nursing care unit and the use of ventilators, supplementary feeding devices and IVs can be maintained.

The program is based on an intensive team effort, both from a cognitive and physical standpoint, utilizing neurological evaluation, physical and occupational therapy including cognitive strategies, evaluation by neuropsychologists and rehabilitation psychologists. Progressive care nurses, hyperbaric oxygen therapists, respiratory therapists, speech and hearing therapists, dietitians and social service specialists are included in the personnel serving the individual. Furthermore, family counseling through the chaplain's office, social service department, rehabilitation psychologists, and the Head Injury Foundation of Indiana is sought.

The underlying theory that a damaged brain which has not recovered and remains in a so-called comatose or semicomatose state can be rehabilitated is based on the so-called theory of the "idling" neuron. It has been proven beyond any doubt that in any type of brain injury, there are cells that are viable but non-functional. If this cell population is large enough and of functional importance, there is a possibility that it can be returned to an animated state. Although we feel that it is important to make the initial attempt to "reactivate" the nerve cells early in the course of the disease, there has been a report of return of neural functioning after seven years in a so-called "fixed visual field defect."[1]

Neuroplasticity, that is, the ability of the central nervous system to recover after serious injury, has now been established. If the neuron is intact, dendritic branching and sprouting can occur which could re-establish nerve pathways that have been interrupted. Regeneration in a human brain following injury has now been demonstrated in the human central nervous system.[2] Brain revascularization has been introduced by several authors, and neurological improvement as previously noted has been substantiated even two or three years after the brain injury has occurred.[3]

We feel that the injured brain can be re-programmed, similar to a computer, and that by re-programming the brain with the use of intense stimulation, including olfactory, gustatory, sensory stimulation of the skin and most importantly visual and auditory stimulation, functional demand is created and recovery is facilitated. This type of coma-arousal program is dependent upon frequency as well as intensity and duration of the stimulation.

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The stimulation techniques are carried out on an hourly basis and family members are taught the techniques so that they can continue this type of therapy without nursing supervision.

What makes the program more innovative and unique than any other existing at this time is the utilization of hyperbaric oxygen (HBO) therapy. We believe this may be the critical difference in this coma-arousal program as compared to others around the country. We know that the nervous system is very sensitive to hypoxia and that patients who have had severe head injuries, even after a long recovery period, may have a markedly reduced cerebral blood flow to the damaged area. When exposed to hyperbaric oxygen, leading to increased oxygen tension levels in the brain, the viable nonfunctional cells appear to be stimulated. In addition, it is well known that hyperbaric oxygen facilitates vasogenesis in peripheral tissue and there is no reason to feel that it does not do the same in the central nervous system. Thus, we can take advantage of the physiological properties of this modality to stimulate neuronal recovery. The use of HBO on an acute basis has been substantiated in several papers including that of Dr. Holbach in the treatment of over 100 midbrain injuries.[4]

The use of HBO for chronic brain pathology has also been substantiated by papers by Dr. Neubauer, Dr. Tischenko, and Dr. Kapp.[5,6,7]

Every individual who has entered the program has been in semi-coma or coma for at least three weeks, the average individual entering the facility being unconscious for some three months. Our results would indicate that the younger individual who was treated as early as possible after the injury has occurred is the best candidate for recovery. All of those treated have plateaued neurologically and have shown little if any tendency for spontaneous improvement prior to their entrance into the program.

Hyperbaric oxygen therapy is utilized twice a day for approximately 90 minutes and there have been no complications with the use of this modality.

We now have treated eighteen individuals ranging in age from 2 to 43 years. Approximately 50% of these people improved to the point that they could be transferred to a rehabilitation center with higher cognitive and physical programs available.

The length of the program is approximately four to six weeks and if at that time the individual has shown no evidence of improvement, referral to a long-term lower level head injury rehab program is carried out. Presently, we have not usually accepted individuals who have been injured more than six months previously; however, on occasion, we have accepted patients who have had a longer period of unconsciousness who we felt possibly had some further rehabilitation potential and who had not been exposed to reasonable care prior to admission to University Heights Hospital.

It is our basic philosophy that every brain-injured individual should be given at least a chance for recovery before sending him or her on to an extended care facility where this opportunity would be markedly reduced.

Those involved in the program are aware of the criticism that can be leveled stating that such improvement might well have occurred on a spontaneous basis; however, we simply must realize that up to the time that the brain-injured patient has been received in our program such improvement has not occurred and that within three to four weeks in the program, those people who eventually do well begin to respond in a manner which they have not done up to that time.

It is impossible, in my opinion, to double blind a head injury program since each patient is so unique; however, we have begun to obtain evoked potential studies in an attempt to quantify our results.

With further experience we hope to increase the program's potential and efficiency. The Coma-Arousal Center may be the only reasonable alternative health care facility in a field which up to now has been unable to reverse the dismal prognosis usually associated with the coma patient.

REFERENCES

1. Roski R, Spetzler RF, Owen M, *et al*: Reversal of a seven-year-old visual field defect with extracranial-intracranial arterianastomosis. *Surg Neurol*, 10:267-268, 1978.
2. Grady MS, Stewart O, Jane JA: Regeneration in a human brain following injury. Report, *American Association of Neurological Surgeons* meeting, 1985.
3. Goldsmith: Use of omental transposition for brain revascularization. *JAMA*, July 7, 1982.
4. Holbach KH: Improved reversibility of the traumatic midbrain syndrome following the use of hyperbaric oxygen. *Acta Neurochirugic*, 30:247-256, 1974.
5. Neubauer R: The effect of hyperbaric oxygen in prolonged coma. *Personal communication.*
6. Tischenko AT: Hyperbaric oxygen therapy used in mental disorders due to serious brain damage. *Zh Nevropatol Psikhiatr*, 76:262-268, 1976.
7. Kapp: Neurological response to HBO: A criterion for cerebral revascularization. *Surg Neurol*, June 1981.

Sudden Death Secondary to Primary Dissecting Aneurysm of the Coronary Artery

TSAU-YUEN HUANG, M.D.
Gary

Abstract

This report describes sudden death of a 45-year-old man secondary to primary dissecting aneurysm of the left anterior descending coronary artery. Physical exertion and hypertension may be the contributing factors leading to the dissecting aneurysm. Sudden death may be secondary to acute dissection of the coronary artery with acute myocardial ischemia and cardiac arrhythmia.

DISSECTING ANEURYSMS of the coronary arteries (DACA) are extremely rare. There are fewer than 50 cases reported in the literature.[1] DACA can be classified into two groups: iatrogenic and non-iatrogenic. The former may be iatrogenically induced following cardiac surgery or coronary angiography,[2,3] while the latter most frequently occur in women in the post partum period,[4] or less frequently in other etiology.[5] Sudden deaths without prior episode of cardiac diseases are the typical clinical picture of the non-iatrogenic DACA.[6]

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Case Report

A 45-year-old man had a sudden onset of chest pain and died while riding a bicycle. Past history indicated that he was hypertensive. Autopsy revealed myocardial hypertrophy. The heart weighed 450 gm. The coronary arteries showed minimal arteriosclerotic changes. A 2.5 cm. segment of 90% narrowing of the lumen by an eccentric intramural hematoma was present starting at approximately 1 cm. distal to the origin of the left anterior descending branch. There was no intimal tearing in that area. Microscopically, there was an eccentric dissection of the outer third of the media filled with fresh blood (*Fig. 1 and 2*). No histopathologic evidence of cystic medionecrosis was noted. The intima showed minimal arteriosclerotic changes characterized by duplication of the internal elastic lamina. The myocardium of the anterior left ventricle showed eosinophilic degeneration with focal loss of cross striations representing early ischemic changes.

Discussion

This report describes a case of sudden death secondary to non-iatrogenic DACA with focal myocardial ischemia. The histopathologic changes of the dissecting aneurysm are similar to those described by others.[3] No intimal tearings, cystic medionecrosis or cystic medial spaces[2] are present in this case. Although the pathogenesis is unknown, it is suggested that DACA may derive from rupture of the vasa vasorum.[1] Physical exertion and hypertension might have been the contributing factors leading to DACA in this case. Acute dissection of the coronary artery with 90% narrowing of the lumen may cause sudden reduction of the cross-sectional area of the lumen to one-hundredth of that of the original. This sudden reduction of blood flow through the left anterior descending artery, hence, may result in acute myocardial ischemia, cardiac arrhythmia and sudden death.[6]

REFERENCES

1. Shin P, Minamino T, Onishi S, Kitamura H: Dissecting aneurysm of the coronary arteries. *Acta Pathol Jpn*, 32:713-724, 1982.
2. Bulkley BH, Roberts WC: Dissecting aneurysm (hematoma) limited to coronary artery. A clinicopathologic study of six patients. *Am J Med*, 55:747-756, 1973.
3. Smith JC: Dissecting aneurysm of coronary arteries. *Arch Pathol*, 99:117-121, 1975.
4. Palomino SJ: Dissecting intramural hematoma of left coronary artery in the puerperium. A case report and survey of the literature. *Am J Clin Pathol*, 51:119-125, 1969.
5. Boschetti AE, Levine A: Cystic medionecrosis with dissecting aneurysm of coronary arteries. *Arch Intern Med*, 102:562-570, 1958.
6. Claudon DG, Claudon DB, Edwards JE: Primary dissecting aneurysm of coronary artery. A cause of acute myocardial ischemia. *Circulation*, 45:259-266, 1972.

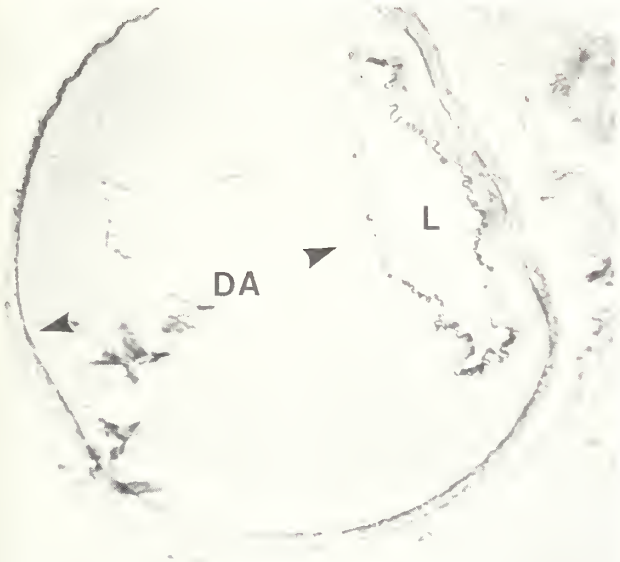


FIGURE 1: An eccentric dissecting aneurysm (DA) of the coronary artery with intramural hematoma. Notice dissection (arrows) at outer third of the media (elastic van Gieson's stain, x 10).

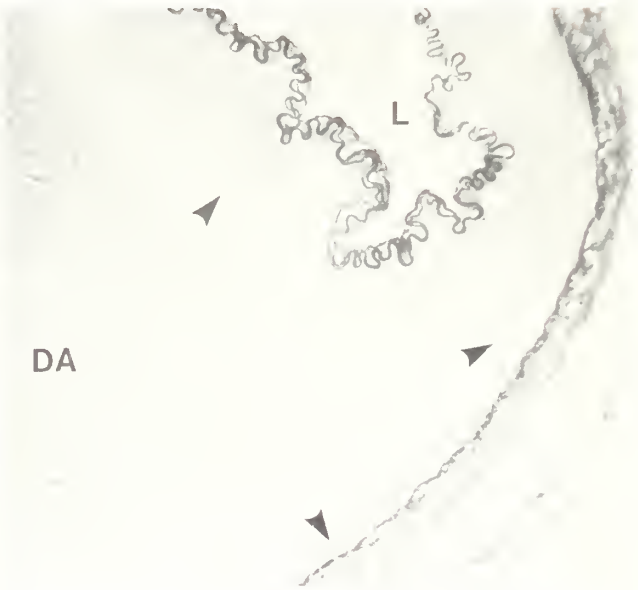
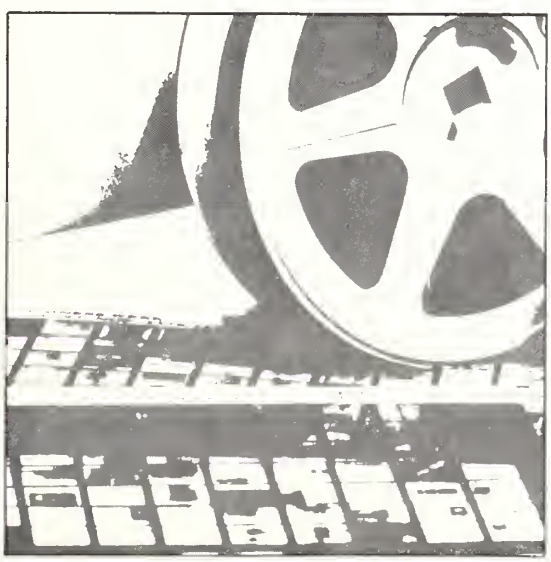


FIGURE 2: Closer view of the dissecting aneurysm (DA) and points of dissection (arrows). Intima shows minimal arteriosclerotic changes characterized by duplications of the internal elastic lamina (elastic van Gieson's stain, x 100).

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Advances in Non-Pharmacologic Treatment of Hypertension: A New Approach to the Problem of Effective Dietary Sodium Restriction

2. Dietary Instruction

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The Sources of Sodium Content Are Almost Endless, So People Must Become Aware of How to Restrict Salt Intake. . .

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These studies were supported, in part, by grants from the USPHS, HL 27398 and HL 30561.

OVER THE LAST FIVE YEARS the Hypertension Research Center has developed a successful program for reduction of dietary sodium intake. Modification of sodium intake is less difficult than other dietary changes because patients need not adhere to a rigid eating schedule (e.g., in conjunction with insulin therapy for diabetics) or significantly reduce their food intake (e.g., hypocaloric weight loss diet).

Dietary instruction in our program addressed each of the major obstacles to compliance often encountered when trying to follow a reduced sodium diet. One problem is that of inadequate and/or inaccurate information. Compliance with a low sodium diet requires that patients: 1) know what to do and how to do it, 2) believe that the benefits of the diet outweigh its costs and hassles, 3) have the skills to make the required changes in their food purchasing, preparation and consumption, and 4) have a support system which facilitates their acquisition and maintenance of new dietary habits. While "cut down on your salt" may be one of the most common admonitions heard in the doctors' office,[28,29] this advice is rarely followed because it erroneously assumes that patients already have the requisite knowledge, attitudes, skills, and support to make the necessary changes in their long-standing dietary habits.

Health professionals other than dietitians are often regarded as reliable sources of nutrition information; however, this is frequently not a valid assumption.[30] While practicing physicians report that they commonly provide advice on sodium restriction, their knowledge of the sodium content of common foods is no greater than that of the general public.[31] In our program, all dietary information was provided by a registered dietitian who had received additional training in the sodium content of foods and in techniques for counseling patients to ensure dietary compliance.[32]

Another major obstacle to effective reduction in sodium intake is a lack of practical knowledge of the sources of sodium in foods. To ensure that participants had adequate knowledge of the sources of sodium in foods, they were taught that the most common dietary sources of sodium can be categorized into: naturally occurring sodium, sodium added in the home, and sodium added during processing. Although ordinary table salt (sodium chloride) and other sodium-containing flavorings added in the home during cooking or at the table are the most easily recognized sources of sodium, these frequently are not the chief sources of sodium in the diet since they usually account for less than 30% of total daily intake.[1] Whereas some foods in their unadulterated form are virtually sodium-free, others are naturally much higher in sodium. On the average, this source accounts for approximately one-fourth of the normal daily dietary sodium intake.[33,34]

The third, and most generous, source

of dietary sodium in the diet is that which is added during processing, accounting for one-half of normal dietary sodium intake.[33,34] Here, again, sodium chloride is the main contributor. In fact, in popularity salt ranks second only to sugar in the total quantity added to food each year.[34] A small amount of sodium is contributed by other sodium-containing compounds which function in a variety of ways including: leavening and flavoring agents, preservatives, texture enhancers, or coloring agents, etc. The percentages listed above do not take into account wide variations in personal taste preferences and food selection differences. Neither do they account for other occasional sources of sodium such as prescription and nonprescription medications.

As presently implemented, the instruction given by a registered dietitian is composed of three separate lessons which vary in length from one to three hours. The goal of instruction is to help patients master three important skills: food purchasing, food preparation and food selection when eating away from home. The more you ask people to change their behavior, the less successful you will be in producing those changes. Therefore, as much as possible we try to tailor the diet plan to the eating habits and lifestyles of the patients and their families. From the information obtained in a patient's three-day food record and a questionnaire about food likes and dislikes, the dietitian attempts to determine an initial diet plan most likely to be satisfying to the patient. If the patient eats away from home frequently, then the meal plan includes acceptable selections when dining out. If the patient or family food preparer rarely prepares food from scratch, then the dietitian does not suggest meals which involve a lot of preparation. If the family has limited income, then economical choices are suggested. Patients are always consulted about acceptable alternatives and are actively involved in making appropriate dietary selections. The initial instruction was based on a basic booklet similar to that often used in the clinical setting and the American Heart Association Cookbook, *Cooking Without Your Salt Shaker*.[35] Two additional supportive sessions were conducted during the initial weeks of the sodium restriction phase. The following topics were covered in these sessions.

Grocery Shopping

Compliance with a low sodium diet requires identification and purchase of appropriate foods. To enhance this ability a survey was done of major Indianapolis food chains to determine the availability of specific low sodium products such as ketchup and baking soda. The resulting information was compiled in the form of a handout entitled "Grocery Guide" and given to patients during the initial instruction. Other sources where special products could be found, such as health food stores, were identified for those unable to locate the necessary low sodium items in their supermarket.

The value and importance of reading product labels was also addressed during this session. Patients were asked to read the food labels of a high sodium product and the label of a comparable low sodium product and to calculate the milliequivalents (mEq) of sodium per serving for each food. Participants learned to divide the number of milligrams of sodium by 23 to obtain the number of milliequivalents. Commonly available nutrient information was also pointed out on package labels. In addition, patients were asked to interpret the labels of foods which have a high sodium content (e.g., instant pudding) even though they do not taste salty.

Any specific product information requested by the food preparer was researched by the dietitian. If sodium values of these products were not listed in any of the available resources, then the manufacturer was contacted. Participants were also encouraged to obtain one of the commercially available paperback guides to the sodium content of brand name foods. Commonly asked questions led to the development of special handouts. One such handout included cereals which were compatible with their food preferences in order to maintain their daily sodium intake at 80 mEq or less (a little less than 2 grams) of sodium.

Eating Away From Home

Many families indicated that creative lunch ideas were one of the most difficult aspects of the study since this was the meal most often eaten away from home. A handout was developed to provide suggestions for dining away from home. This was divided into two parts: "Brown Bagging It" and "Choosing a Meal in a Restaurant or at a Friend's Home." Several brown bag menu ideas were provided as well as recipes for menu items and specific lunch packing hints. Main dishes and sandwiches as well as snacks and desserts appropriate for brown bag lunches were organized into lists from which choices could be made.

Breakfast, lunch and dinner were each divided into food courses generally available from restaurants, and specific choices were suggested for each course. The general principles which were outlined in the initial dietary session were reinforced. Fresh meats should be unadulturated by sauces or marinades. Vegetable salads were allowed as long as they contained only fresh and not canned vegetables. Oil and vinegar dressing in separate cruets could be used in any amount whereas a regular salad dressing should be ordered on the side and used only in reduced amounts. French fries and baked potatoes were permitted if unsalted; however, sour cream or butter could be ordered on the side and added in small amounts. A dining guide listing many local restaurants and their menus was used by the dietitian to help patients in selecting meals at restaurants where they normally ate.[36] This was a valuable educational tool and was

helpful in determining which restaurants could best provide a low sodium meal. Specific product sodium information was provided by many chain restaurants upon request.

Fast food restaurants are also part of the weekly routines for many. Thus, ways for families to eat at favorite fast food restaurants were investigated. Although a generic hamburger with its condiments and optional cheese is fairly high in sodium when purchased at most fast food restaurants, it could be ordered to fit into a low sodium diet. For instance, if no salt were added during preparation and low sodium additions such as lettuce, tomato and onion were chosen instead of the typical cheese, pickles, ketchup and mustard, such a hamburger would be relatively low in sodium. French fried potatoes are relatively low in sodium if unsalted and eaten without regular ketchup. Patients were encouraged to make these special requests since fast food restaurants would honor them.

When eating at a friend's home, fewer options may be available. The subjects used personal discretion about informing the host of their restricted diet. Most special occasions are preplanned events and thus could be anticipated and alternatives provided to deal with such situations. In addition, a technique termed "sodium budgeting" was implemented. Although only 80 mEq of sodium was allowed per day, the subjects were able to choose how they would ingest the 80 mEq. If a special event was planned for the day, instruction was provided on how to eat very, very low sodium food during the rest of the day so that they could "save" most of their daily sodium allotment for the special occasion. Sodium budgeting involved eating foods from the low sodium groups: fresh or frozen vegetables, fruit, low sodium fats, low sodium breads and low sodium milk products as opposed to regular products.

REFERENCES

28. Buccicone J, McAllister RG: Failure of single-session dietary counseling to reduce salt intake in hypertensive patients. *South Med J*, 70:1436, 1977.
29. Soltero I, *et al*: A survey of patterns of non-pharmacologic care for hypertensive patients, including recommendations for their children. *Hypertension*, 2:215, 1980.
30. Poplin LE: Practical knowledge of nutrition in the health sciences. *J Am Diet Assoc*, 77:576, 1980.
31. Heidrich FE, Bergman JJ: Physician knowledge of sodium content of common foods. *J Fam Pract*, 14:693, 1982.
32. Cohen SJ: Improving patients' compliance with therapeutic regimens. *J Indiana State Med Assoc*, 76:26-29, 1983.
33. Select Committee on GRAS Substances. Federation of American Societies for Experimental Biology: SCOGS Report 102. National Technical Information Service, Springfield, Va., 1979.
34. Fenner L: Salt shakes up some of us. FDA Consumer 14, 1980. HEW Pub No. (FDA) 80-2129.
35. American Heart Association: *Cooking without your salt shaker*. American Heart Association, Northwest Ohio Affiliate, Inc., 1978.
36. *1983 Indianapolis Dining Guide*. Indy Type, Inc., Indianapolis, Ind., 1982.

PATIENTS NEEDED FOR DIABETES RESEARCH STUDY

The Diabetes Research and Training Center, Indiana University School of Medicine, is seeking patients for studies with an experimental aldose reductase inhibitor to determine if this drug will prevent or retard the development of diabetic retinopathy. Aldose reductase inhibitors work by preventing the accumulation of sorbital in tissues including the lens, nerves and retina. They have already been found to prevent metabolic cataracts and to improve diabetic neuropathy in experimental trials. Since the retinal cells accumulate sorbital, this trial is designed to determine if the administration of the drug would prevent retinopathy or retard its progress. The drug is experimental and although no serious side effects have been found, this study will require close follow-up for one to two years. The potential benefit for patients would be close follow-up of their diabetes and retinopathy including retinal photographs and the possible prevention of a serious and disabling complication of diabetes. The trial is in a double-blind format. Otherwise healthy patients with either type I (juvenile) or type II (adult) diabetes are being sought. Patients either without retinopathy or with nonproliferative retinopathy would qualify. Patient referral may be made by calling or having the patients call the Diabetes Center at (317) 630-6374.

A Pheochromocytoma Presenting with Hyperglycemia

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In 1980 a 63-year-old woman's newly diagnosed hypertension was controlled with a diuretic agent. She remained well until February of 1984 when, at age 67, she fell, fracturing her right distal tibia necessitating surgical stabilization. Her intraoperative course was complicated by tachycardia, blood pressure as high as 218/124mm Mercury, the development of pink, frothy sputum and hypoxemia. In the operating suite she was treated with parenteral propranolol and Apresoline, and the procedure was terminated.

After transfer to the critical care area and treatment with morphine, furosemide and mechanical ventilation, her symptoms and hypertension rapidly resolved. A chest x-ray confirmed the presence of diffuse alveolar infiltrates. In the first post-operative hour, T-wave inversions were noted in an EKG's precordial leads. When alert, she had both a right hemiparesis and an expressive aphasia. An intraoperative cerebrovascular accident appeared to be the etiology for both her pulmonary edema (presumed noncardiac) and her transient hemodynamic instability. A CT scan confirmed an ischemic area in the left parietal region. The patient's neurologic deficit gradually improved and she was released with a controlled blood pressure on a diuretic and Atenolol 50mg daily.

The patient was then rehospitalized by her family physician in November 1984 with hyperglycemia. Her initial glucose was elevated to greater than 700mg/dl. She was treated with diet and intermediate insulin with adequate control. An elevated serum alkaline phosphatase was noted on screening laboratory data. On further evaluation both cholelithiasis and a mass effect in the region of the head of the pancreas were present. The patient was subsequently released.

Within 24 hours of discharge she represented with anxiety, epigastric discomfort and vomiting. She was admitted to the critical care area, and serial enzyme studies and EKGs were normal. Following transfer to a medical bed, icterus was noted and the patient's total bilirubin was elevated at 3.9mg%. She was then seen in medical consultation. The patient described her epigastric discomfort as acute in onset in the post prandial period. She had been tachycardic at the time of admission. There was no family history of multiple endocrine adenomatosis. On examination her pressure was 130/85mm Mercury without orthostatic change. Heart rate was 120. She appeared jaundiced. Her lungs were clear and a grade 2/6 systolic ejection murmur was present at the left lower sternal border. Abdominal and genitourinary exams were unremarkable. Stool was hemotest negative. Pulses were present in the lower extremities to the level of the popliteal artery on the right and the femoral artery on the left. The patient had a mild expressive aphasia. No motor deficits were noted.

On review of the previous studies, the biliary tree was unremarkable, a 5cm mass appeared contiguous with the posterior aspect of the panereatic head and cholelithiasis were all confirmed by both ultrasound and CT scanning techniques. Serum alkaline phosphatase was 496 units (normal 50-136 units). GGT was 469 units (normal 5-55 units).

It appeared that the retroperitoneal mass was not obstructing the biliary tree. Choledocholithiasis was presumed to be the etiology of the patient's jaundice. With the history of hypertension, a complicated operative course in February 1984, new severe hyperglycemia and the unexplained retroperitoneal mass, an extra-adrenal pheochromocytoma was considered.

A 24-hour urine collection for catecholamines and VMA was obtained with the patient without antihypertensive therapy for 96 hours. The total catecholamines were elevated to 1,779 mcg/24 hours (normal 0-280); VMA was elevated to 39mg/24 hours (normal 2-10). Surgical intervention for both choledocholithiasis and a presumed pheochromocytoma was planned. She was titrated to a total daily dose of 80mg of phenoxybenzamine and 200mg Metoprolol in preparation for surgery. With this regimen her preoperative blood pressure was 100/70 with a pulse of 80.

On 12/6/84 she was taken to the operating suite where excision of the retroperitoneal mass, cholecystectomy and common duct exploration were performed. The vascular supply of the mass originated from the posterior aspect of the pancreas, precluding isolation and ligation of the vascular supply without manipulation of the mass. The tumor also appeared adherent to the origin of the superior mesenteric artery. Her intraoperative course was again complicated by wide variation in blood pressure and heart rate despite the preoperative therapy. She was monitored and treated with intravenous phenylephrine and nitroprusside.

Following tumor removal, continuous phenylephrine infusion was maintained and subsequent cholecystectomy was uncomplicated. Post-

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operatively, she was treated with crystalloid for volume loading and the phenylephrine therapy gradually eliminated. She was treated with insulin only in the immediate postoperative period. She was discharged without medication or dietary restriction with blood sugars ranging between 70 and 105mg/dl and blood pressure of 130/70. She has developed no recurrent symptoms.

Pathologic evaluation of the specimen revealed a multinodular, hemorrhagic, yellowish brown mass. Microscopic exam was consistent with a pheochromocytoma with intact capsule.

Discussion

This patient presented with multiple interesting manifestations of her pheochromocytoma. Her initial hypertension was not episodic or associated with tachycardia. She developed significant hyperosmolality with her hyperglycemia. The only episodic or intermittent symptoms had occurred intraoperatively in February of 1984 and at the time of her last hospitalization.

This patient's pheochromocytoma arose extra-adrenally, with a right lumbar sympathetic ganglion the likely site of origin. Her operative complications in February of 1984 could have suggested the diagnosis to those in her attendance but with the new hemiparesis both her pulmonary edema and hemodynamic instability were attributed to that new neurologic deficit. As her subsequent hospital course in February of 1984 was unremarkable, no further diagnostic evaluation was considered necessary at that time.

A pheochromocytoma is a rare but curable etiology of hypertension and has an incidence of 0.3 to 0.7 per 1,000 hypertensive patients.[1] In addition to hypertension, hyperglycemia is a common manifestation. The mechanism of the abnormal glucose tolerance is that seen in fight-flight response. The excessive catecholamines suppress insulin release, promote glycogen catabolism and inhibit peripheral glucose uptake. Generally, the hyperglycemia associated with a pheochromocytoma is mild; however, uncontrolled diabetes has rarely been reported as a presenting symptom.[2] This patient's rapid resolution of clinical diabetes re-emphasizes the importance of catecholamine excess as a factor in glucose intolerance.

Surgical procedures in undiagnosed patients with pheochromocytoma can precipitate hypertensive or hypotensive episodes as in this patient's February 1984 orthopedic procedure.[3] The attendant risks include myocardial infarction, acute left ventricular failure and cerebrovascular accident. In the Mayo Clinic's 50-year autopsy series of patients with pheochromocytoma, 37% died intra or perioperatively related to that hemodynamic instability.[4] In their series, only 24% were diagnosed prior to death, of which one-fourth were found incidentally at laparotomy for unrelated conditions. In 76% the diagnosis was made only at autopsy. Of that 76%, only one-half had a history of hypertension. In the autopsy series, there was no improvement in the rate of clinical diagnosis between 1928 and 1977. However, it was an autopsy series and therefore those patients identified and treated without mishap survived and were not included in the study. In another Mayo Clinic series, from 1950 through 1959, the total incidence of pheochromocytoma in the population of Rochester, Minnesota was reviewed. Eleven patients with pheochromocytoma were identified; five were discovered at the time of autopsy (45%).[5] A high index of suspicion is therefore necessary as the "classic" symptoms are not reliable as a screening tool for this treatable disease.

The preoperative evaluation of this patient consisted of (1) the consideration of the diagnosis, (2) urinary studies for confirmation of abnormal catecholamine excretion and (3) CT scan identification of a lesion. That identification was felt adequate and therefore no angiographic studies were performed. The possibility of multiple sites of origin was considered but discounted due to the absence of familial history of pheochromocytoma or MEA II syndrome and the patient's age. Previous studies have confirmed the value of the CT scan for anatomic localization of a pheochromocytoma.[6,7]

Summary

This patient's course re-emphasizes the importance in considering a diagnosis of pheochromocytoma in any patient with or without hypertension who has any of the other associated clinical findings such as episodic tachycardia, episodic "anxiety" and hyperglycemia or, as in this case, overt diabetes mellitus. Screening for pheochromocytoma is simple, once the diagnosis is considered. Accurate noninvasive localization of the lesion is now possible with the CT scan. A major risk to the patient with an undiagnosed pheochromocytoma remains morbidity and mortality associated with surgical procedures for unrelated conditions.

REFERENCES

1. *Internal Medicine*, Editor-in-Chief, Irving H. Stein M.D., Little, Brown and Company. Boston, 1983.
2. Boltic RA: Spells, weight loss, and diabetes out of control. *Hospital Practice*, 43-44, Aug. 1983.
3. Loeg MD: Hypertensive crisis during rhinoplasty. *Hospital Practice*, 52-54, July 1984.
4. St John Sutton MG, Sheps SG, Lie JT: Prevalence of clinically unsuspected pheochromocytoma: Review of a 50-year autopsy service. *Mayo Clinic Proc*, 56:354-360, 1981.
5. Beard CM, Sheps SG, Kurland LT, Carney JA, Lie JT: Occurrence of pheochromocytoma in Rochester, Minnesota, 1950 through 1979. *Mayo Clinic Proc*, 58:802-804, 1983.
6. Stewart BH, Bravo EL, Haager J, Meaney TF, Tarazi R: Localization of pheochromocytoma by computerized tomography. *New England Journal of Medicine*, 299:460-461, 1978.
7. Laursen K, Damgaard-Pederson R: CT for pheochromocytoma diagnosis. *American Journal of Radiology*, 134:277-280, 1980.

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An Analysis of Athletic Health Care Management in Indiana's Secondary Schools

JOHN W. SCHRADER
Bloomington

Sports Medicine Survey Reveals That Fewer Than Half of Secondary School Athletic Health Care Providers Are Trained in Basic Life-Saving Skills. . .

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Acknowledgment: Marge Albohm, International Institute of Sports Science and Medicine, and Sam Kegerreis, Indiana Central University, for their help in constructing the survey. This study was supported in concept as well as financially by the Governor's Council for Physical Fitness and Sports Medicine and Indiana University.

THE CONCERN OVER interscholastic sports injuries and their care has been researched from various aspects in recent years.[1-9] Within the last decade, results described in the literature of this status has ranged from "obsolete"[1] to "barbaric."[2] While severe injuries eventually find medical attention, many suffer during the interim by mishandling, lack of recognition or inadequate equipment.[1,2,9] Injuries of lesser severity, although larger in number,[13] are almost always left to the resources available at the school.

Because of the large number of "non-emergency room" problems nationwide, and lack of current information concerning the state of Indiana, the Indiana Governor's Council for Physical Fitness and Sports Medicine conducted a survey to assess the status of health care provided in the secondary schools.

Instrument

The survey instrument was developed by a panel of experts familiar with high school health care delivery systems. The items identified were prepared in a yes/no format to facilitate ease of response. All questions allowed for the opportunity to add comments or qualifiers. Multiple responses were accepted on certain questions.

Methods

Mailing labels containing the names of the secondary schools in the state were obtained from the Indiana State Board of Health. The survey was mailed to the principals of the schools with a cover letter explaining the purpose of the investigation and requesting compliance in its completion. A self-addressed, stamped envelope was included with each survey to encourage return. The study was conducted during the late spring of 1983 and returns were received through the summer. The results were subsequently tabulated and analyzed.

Discussion

Of the 186 respondents to the survey 66% of the schools indicated that they had a designated employee providing health care for their athletes. The greatest percentage of individuals identified in this capacity were the school nurse, followed by a faculty member of the school. The next highest group providing care was the board-certified athletic trainer of the National Athletic Trainers Association, Inc. It is important to note that 20% of the survey respondents identified having a NATA-certified individual. In an effort to cross validate this information, these figures were referenced with current information from the Indiana Athletic Trainers Association, Inc.

The results of this investigation revealed that, according to the Indiana Athletic Trainers Association (IATA) membership figures, 20% or 37 individuals would represent a 100% response from all schools having a NATA-certified athletic trainer. This introduced considerable bias into the survey in that all positive responses were inflated due to the excellent returns from schools with athletic trainers.

Supervision by a Team Physician

Schools claiming a designated individual to provide athletic health care indicated that only 37% had a specifically designated team physician. In contrast, only 24% of the schools without an athletic health care provider had a team physician. While the number of team physicians available in either situation was extremely low, it was not inconsistent with the percentages found in a similar survey of the Chicago-Cook County area (34.6%).[10] This figure lies in sharp contrast to the 92% of colleges[11] with a team physician, especially since colleges deal with approximately one-tenth of the number of athletes who are in high schools.

Qualifications of the Athletic Health Care Provider

The results identifying the preparation of individuals administering to athletes indicated a critical lack of basic life-saving skills. Fewer than one half of the respondents possessed current CPR certification. An even lower percentage possessed current first aid skills or a course in injury recognition and management. It must be emphasized again that the percentages are probably inflated due to the extremely high rate of response of athletic trainers.

While a large percentage of schools indicated that the school nurse was the individual in charge of handling athletic injuries, an inconsistency arises in that many schools do not have the service of a full-time nurse during normal operating hours. If, in fact, the nurse provided care for athletes, it would appear that there would be at least a 14- to 16-hour delay in management while waiting to see the nurse on the subsequent day.

Emergency Equipment

The majority of schools surveyed indicated the presence of a refrigerator, stretcher and whirlpool. These items could be considered acceptable equipment by most standards. The lack of spine boards, cervical collars and bolt cutters indicated inadequate preparation for the severe or life-threatening injury. For schools in a metropolitan area where a highly developed emergency medical service is available, these items are not as essential as they would be in urban/rural schools.

The fact that 87% of the schools possessed a whirlpool raises three areas of concern. First, how prepared are the individuals supervising this piece of equipment in its operation, indications, and contraindications for use? Second, how well is this equipment maintained and is it routinely serviced? Lastly, 28% were unable to verify the use of a Ground Fault Interrupter (GFI) with their whirlpool. This electrical protection should always be in use with a whirlpool or any other piece of equipment associated with water and humans.

Emergency Procedures

Fifty seven percent of all respondents indicated the existence of written emergency procedures for home activities. This dropped to 40% when the teams travel for competition. These figures, while alarming, are not surprising to the author. A well thought out emergency plan in a threatening situation can make the critical difference between life or disaster. Accurate telephone information, charge personnel, equipment locations, and ambulance accesses are items of major importance when an emergency occurs. If planned in advance, these situations can be expedited efficiently and with utmost care for the victim.

Record-Keeping

Reports on major injuries are only filed by 68% of the schools, according to the survey results. The obvious lack of records in the other 32% of the schools could indicate potentially severe legal complications if litigation occurred. Fewer than half of the schools surveyed maintained any type of record on "minor" injuries. The responsibility for record maintenance varied among the institutions.

Summary

The school superintendent is continually faced with the very difficult task of deciding what personnel to hire and the capacity in which the employee is to serve the system. This often results in decisions that are based on available finances rather than the absolute needs within the school. Likewise, as public servants these decisions are predicated on the demands made by parents within the system. Interscholastic activities are not an official part of the academic experiences for which the superintendent must give priority. However, all too often because these programs are "outside" of school, student health care is rarely given the serious consideration it deserves and demands.

Licensed nurses are one of the most valuable assets that an educational institution can possess to maintain a healthful and safe environment for its students. The background of preparation the nurses need in order to face current health and societal problems is unending. Due to this fact, it is unrealistic to believe that the nurse is physically able to provide coverage during and after school hours or have the preparation for it. Carey and Shute[12] in a study of school nurses stated that "many school nurses are, unfairly, on the firing line." They proceed to state that, based on the results of Sports Trauma Management Inventory (STMI), athletic trainers are more knowledgeable than school nurses about athletic injury recognition and management.

This survey was conducted to develop some measure of the type of health care being provided for Indiana interscholastic student athletes. The results indicate a low rate of physician contact. More importantly, the amount of preparation of those identified as the health care provider in the areas of injury recognition and management were highly inadequate except for those specifically qualified (NATA-certified athletic trainer).

While minimal emergency equip-

ment was available, certain essential pieces of equipment were absent in the majority of schools. Injury record-keeping was occurring in a high percentage of the schools. The quality of these records was not assessed.

In conclusion, this survey substantiates that there is an inconsistent (or non-existent) quality of health care being provided for students in Indiana. Further research is recommended to study alternatives for rectifying the situation. Additional investigation should also be undertaken to monitor injury patterns and rates in the various sports.

REFERENCES

1. Wrenn JP, Ambrose D: An investigation of health care practices for high school athletes in Maryland. *Athletic Training Journal*, 85-92, Summer 1980.
2. Hage P, Moore M: Medical care for athletes: What is the coach's role? *The Physician and Sportsmedicine*, 9:140-151, 1981.
3. Olson CO: The Spokane study: High school football injuries. *The Physician and Sportsmedicine*, 7:75-82, 1979.
4. Requa R, Garrick JG: Injuries in interscholastic wrestling. *The Physician and Sportsmedicine*, 4:44-51, 1981.
5. Estwanik JJ, Rovere GD: Wrestling injuries in North Carolina high schools. *The Physician and Sportsmedicine*, 1:100-108, 1983.
6. Park RD, Castaldi CR: Injuries in junior ice hockey. *The Physician and Sportsmedicine*, 8:81-90, 1980.
7. Requa RK, Garrick JG: Injuries in interscholastic track and field. *The Physician and Sportsmedicine*, 9:42-49, 1981.
8. Blyth CS, Mueller FO: Football injury survey, Part 3: Injury rates vary with coaching. *The Physician and Sportsmedicine*, 2:45-50, 1974.
9. Redfearn RW: Are high school athletes getting good health care? *The Physician and Sportsmedicine*, 3:34-39, 1975.
10. Porter M, Noble HB, Bachman DC, Hoover RL: Sportsmedicine care in Chicago-area high schools. *The Physician and Sportsmedicine*, 8:95-99, 1980.
11. Rovere GD, Adair DA, Yates CS, *et al*: A survey of team physician and trainer availability and participation in intercollegiate football. *The Physician and Sportsmedicine*, 12:90-104, 1984.
12. Carey RJ, Shute RE: Sports trauma management and the high school nurse. *The Journal of School Health*, 156-58, March 1982.
13. Culpepper MI, Niemann KM: A comparison of game and practices in high school football. *The Physician and Sportsmedicine*, 11:117-121, 1983.

Resident Physician Essay Contest

During the 1985-86 resident training year the Resident Medical Society of the ISMA and INDIANA MEDICINE will conduct a medical essay contest. All members of the Resident Medical Society are eligible to enter. Each author may choose the subject. Essays (medical articles) will be limited in length to 10 pages of typescript, properly margined and double spaced. Illustrations are encouraged and are to be included in the space limitation.

Entries should be mailed to INDIANA MEDICINE, 3935 N. Meridian St., Indianapolis 46208, and be postmarked prior to Jan. 1, 1986.

Judges will consist of two specialists within the field of the article, three medical education directors from Indiana institutions with approved residency training programs, and one member of the INDIANA MEDICINE Editorial Board.

Authors of the articles judged to be the four best will receive prizes of $100 each, and an additional $100 prize will be given to the best article of the four.

All prize-winning articles will be published in INDIANA MEDICINE. It is hoped that space will allow the publication of other entries to be chosen in the order of their numerical scores.

Essays will be judged on the following criteria:

SCIENTIFIC MERIT: Research methods, data analysis, subject or patient population selection, control of variables, literature analysis.

APPLICABILITY: Usefulness of results to private practitioner, academician, researcher.

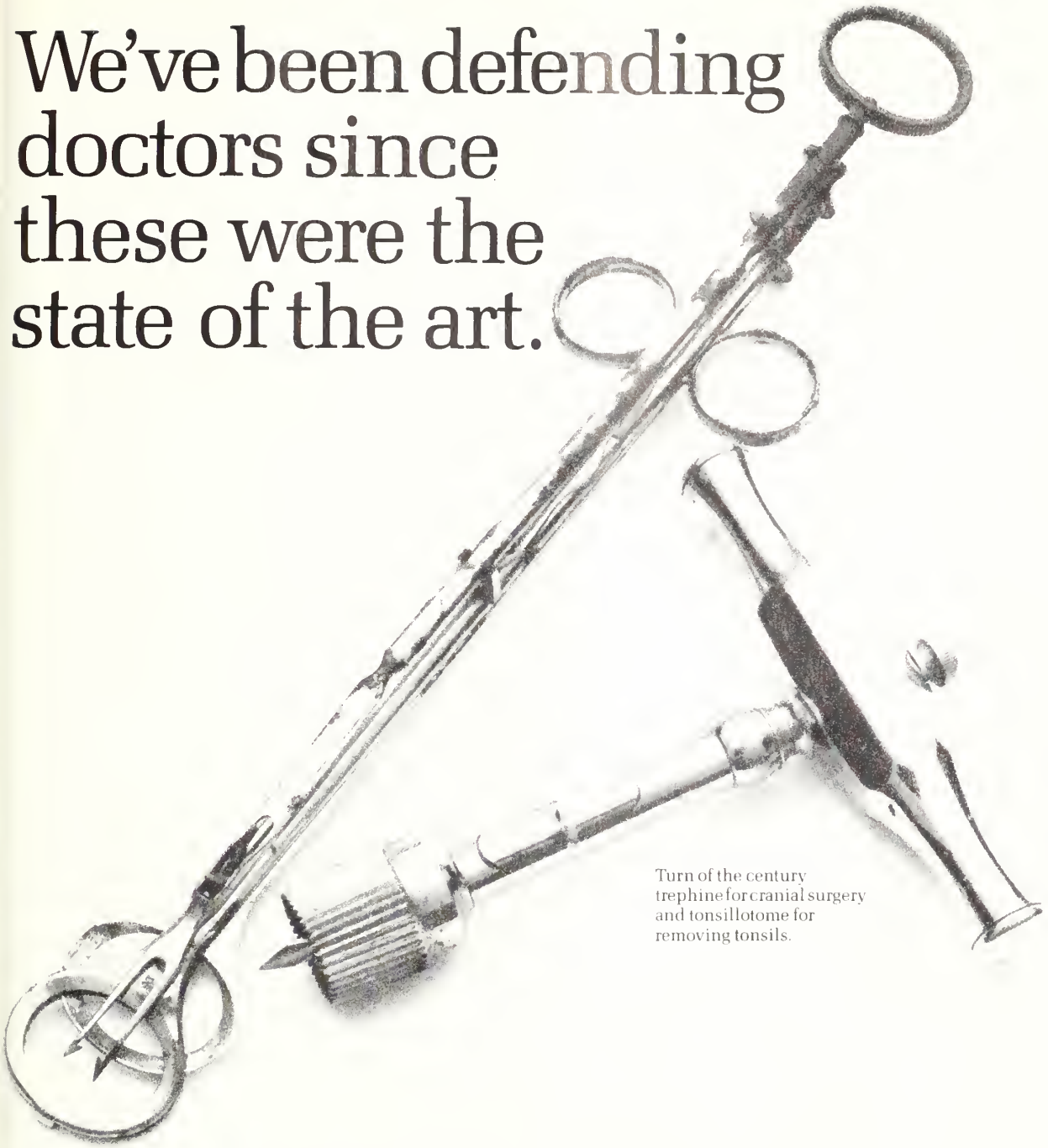
CONTENT: Depth of analysis, continuity of discussion supporting the main thesis, feasibility of conclusions.

INNOVATION: Uniqueness of idea, creativity, improvement of existing techniques, previously undiscovered data, advancement of basic understanding.

Each essay will be assigned a numerical score for each of the four judging criteria by each judge as follows:

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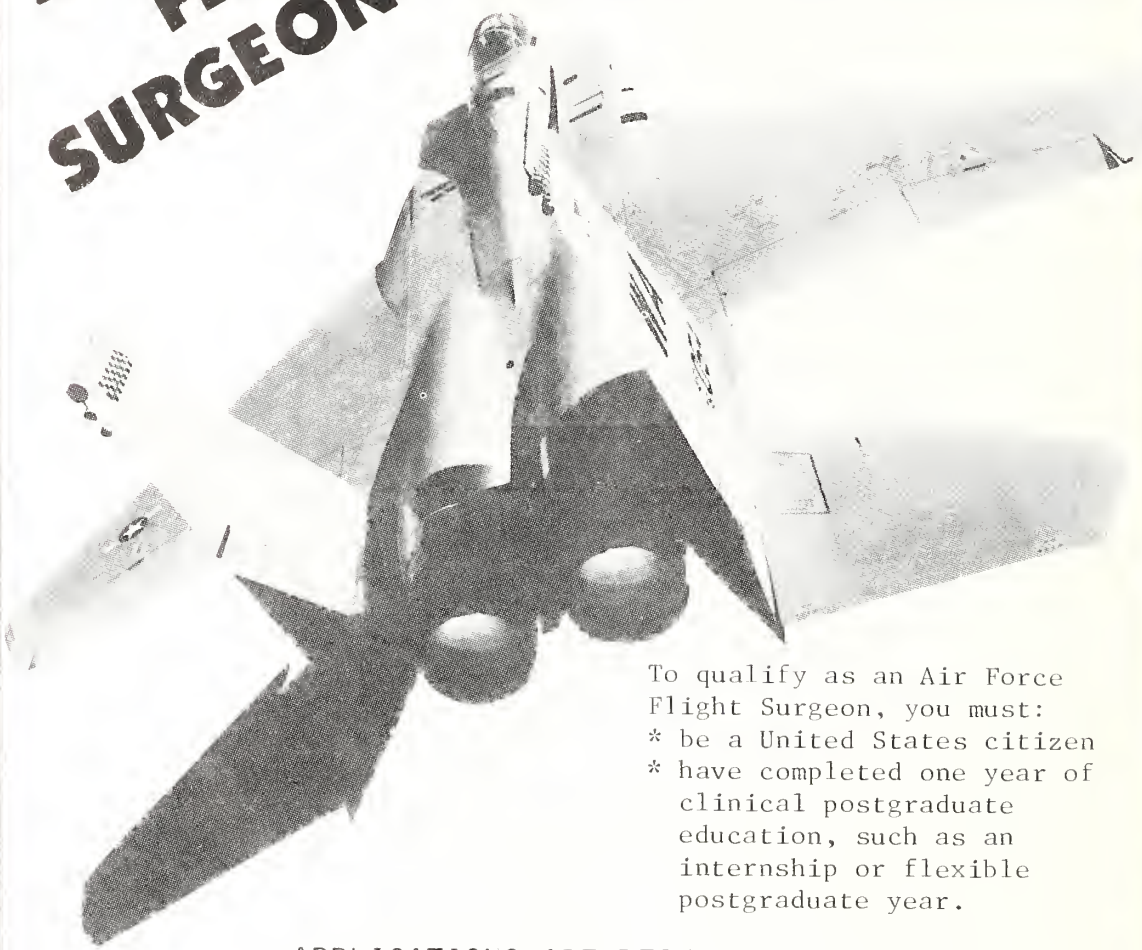
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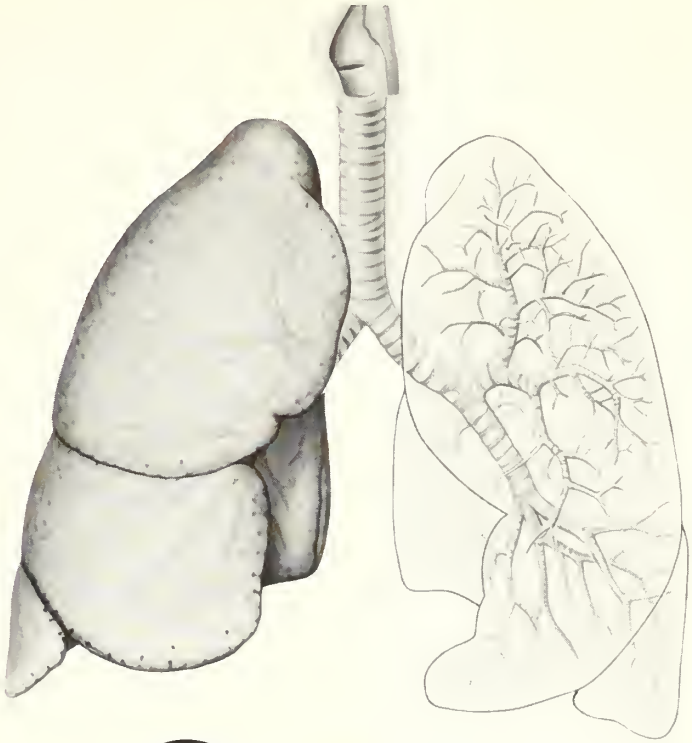
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et Summary Consult the package literature for prescribing ormation

ications and Usage Ceclor* (cefaclor, Lilly) is indicated in the atment of the following infections when caused by susceptible ains of the designated microorganisms

Lower respiratory infections, including pneumonia caused by *eptococcus pneumoniae (Diplococcus pneumoniae), Haemoph- s influenzae* and *S. pyogenes* (group A beta-hemolytic eptococci)

Appropriate culture and susceptibility studies should be formed to determine susceptibility of the causative organism Ceclor

traindication Ceclor is contraindicated in patients with known ergy to the cephalosporin group of antibiotics

rnings IN PENICILLIN-SENSITIVE PATIENTS, CEPHALO- ORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY ERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL OSS ALLERGENICITY OF THE PENICILLINS AND THE PHALOSPORINS, AND THERE ARE INSTANCES IN WHICH TIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, BOTH DRUG CLASSES

Antibiotics, including Ceclor, should be administered cautiously any patient who has demonstrated some form of allergy, ticularly to drugs

Pseudomembranous colitis has been reported with virtually all ad spectrum antibiotics (including macrolides, semisynthetic ncillins, and cephalosporins), therefore, it is important to nsider its diagnosis in patients who develop diarrhea in sociation with the use of antibiotics. Such colitis may range in verity from mild to life-threatening

Treatment with broad-spectrum antibiotics alters the normal ra of the colon and may permit overgrowth of clostridia. Studies dicate that a toxin produced by *Clostridium difficile* is one many cause of antibiotic-associated colitis

Mild cases of pseudomembranous colitis usually respond to g discontinuance alone. In moderate to severe cases, manage- ment should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Precautions *General Precautions* — If an allergic reaction to Ceclor* (cefaclor, Lilly) occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy — Pregnancy Category B — Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor* (cefaclor, Lilly). There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers — Small amounts of Ceclor have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.18, 0.20, 0.21, and 0.16 mcg/ml at two, three, four, and five hours respectively. Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Ceclor is administered to a nursing woman.

Usage in Children — Safety and effectiveness of this product for use in infants less than one month of age have not been established.

Adverse Reactions Adverse effects considered related to therapy with Ceclor are uncommon and are listed below.

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70).

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely.

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain — Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic — Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic — Transient fluctuations in leukocyte count predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal — Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

[0617B2R]

Note: Ceclor* (cefaclor, Lilly) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

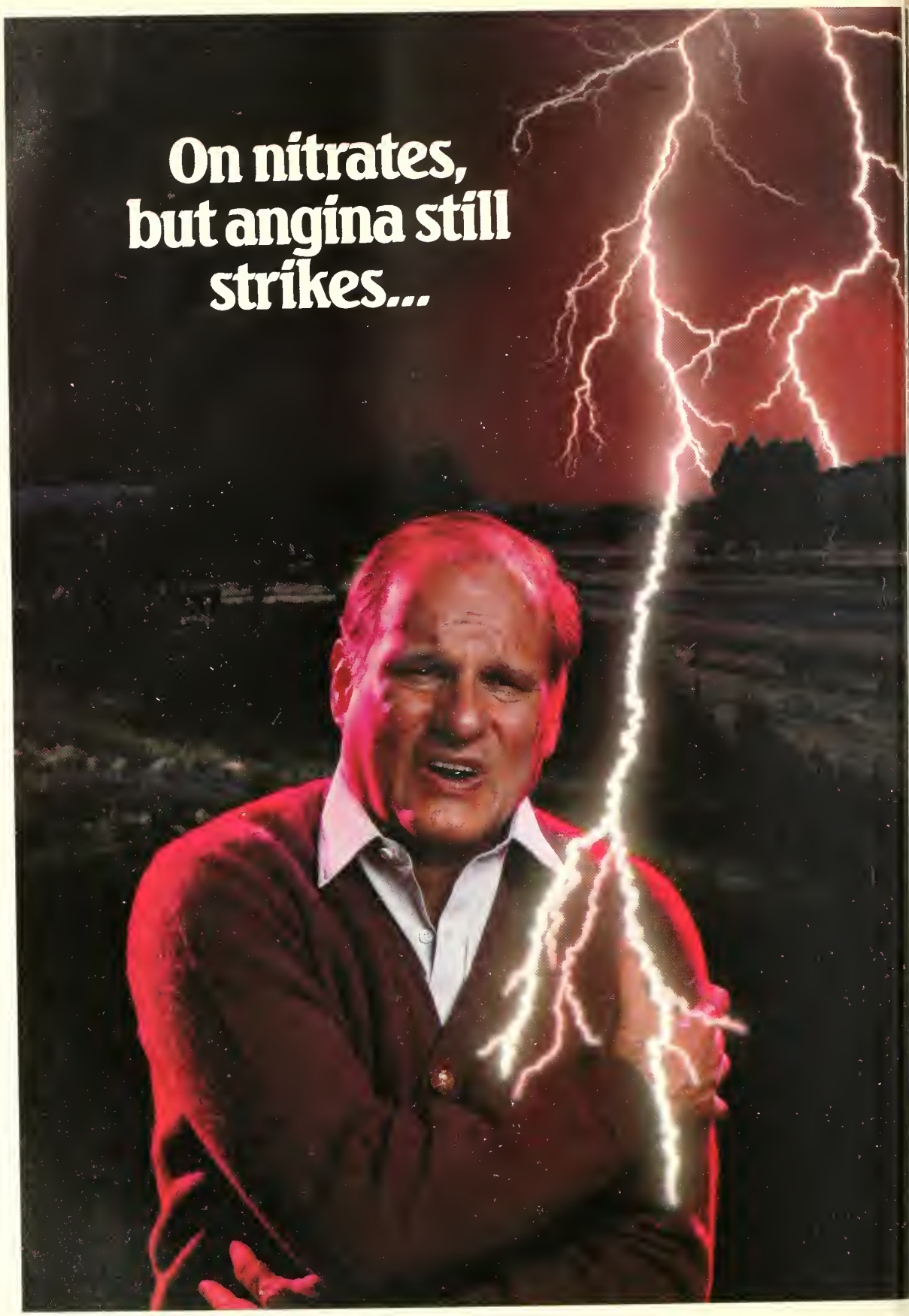
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Contraindications: Severe left ventricular dysfunction (see *Warnings),* hypotension (systolic pressure < 90 mm Hg) or cardiogenic shock, sick sinus syndrome (except in patients with a functioning artificial ventricular pacemaker), 2nd- or 3rd-degree AV block. **Warnings:** ISOPTIN should be avoided in patients with severe left ventricular dysfunction (e.g., ejection fraction < 30% or moderate to severe symptoms of cardiac failure) and in patients with any degree of ventricular dysfunction if they are receiving a beta blocker. (See *Precautions.)* Patients with milder ventricular dysfunction should, if possible, be controlled with optimum doses of digitalis and/or diuretics before ISOPTIN is used. (Note interactions with digoxin under *Precautions.*) ISOPTIN may occasionally produce hypotension (usually asymptomatic, orthostatic, mild and controlled by decrease in ISOPTIN dose). Elevations of transaminases with and without concomitant elevations in alkaline phosphatase and bilirubin have been reported. Such elevations may disappear even with continued treatment, however, four cases of hepatocellular injury by verapamil have been proven by rechallenge. Periodic monitoring of liver function is prudent during verapamil therapy. Patients with atrial flutter or fibrillation and an accessory AV pathway (e.g. W-P-W or L-G-L syndromes) may develop increased antegrade conduction across the aberrant pathway bypassing the AV node, producing a very rapid ventricular response after receiving ISOPTIN (or digitalis). Treatment is usually D.C.-cardioversion, which has been used safely and effectively after ISOPTIN. Because of verapamil's effect on AV conduction and the SA node, 1° AV block and transient bradycardia may occur. High grade block, however, has been infrequently observed. Marked 1° or progressive 2° or 3° AV block requires a dosage reduction or, rarely, discontinuation and institution of appropriate therapy depending upon the clinical situation. Patients with hypertrophic cardiomyopathy (IHSS) received verapamil in doses up to 720 mg/day. It must be appreciated that this group of patients had a serious disease with a high mortality rate and that most were refractory or intolerant to propranolol. A variety of serious adverse effects were seen in this group of patients including sinus bradycardia, 2° AV block, sinus arrest, pulmonary edema and/or severe hypotension. Most adverse effects responded well to dose reduction and only rarely was verapamil discontinued. **Precautions:** ISOPTIN should be given cautiously to patients with impaired hepatic function (in severe dysfunction use about 30% of the normal dose) or impaired renal function, and patients should be monitored for abnormal prolongation of the PR interval or other signs of excessive pharmacologic effects. Studies in a small number of patients suggest that concomitant use of ISOPTIN and beta blockers may be beneficial in patients with chronic stable angina. Combined therapy can also have adverse effects on cardiac function. Therefore, until further studies are completed, ISOPTIN should be used alone, if possible. If combined therapy is used, close surveillance of vital signs and clinical status should be carried out. Combined therapy with ISOPTIN and propranolol should usually be avoided in patients with AV conduction abnormalities and/or depressed left ventricular function. Chronic ISOPTIN treatment increases serum digoxin levels by 50% to 70% during the first week of therapy, which can result in digitalis toxicity. The digoxin dose should be reduced when ISOPTIN is given, and the patients should be carefully monitored to avoid over- or under-digitalization. ISOPTIN may have an additive effect on lowering blood pressure in patients receiving oral antihypertensive agents. Disopyramide should not be given within 48 hours before or 24 hours after ISOPTIN administration. Until further data are obtained, combined ISOPTIN and quinidine therapy in patients with hypertrophic cardiomyopathy should probably be avoided, since significant hypotension may result. Clinical experience with the concomitant use of ISOPTIN and short- and long-acting nitrates suggest beneficial interaction without undesirable drug interactions. Adequate animal carcinogenicity studies have not been performed. One study in rats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. *Pregnancy Category C*: There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor and delivery only if clearly needed. It is not known whether verapamil is excreted in breast milk, therefore, nursing should be discontinued during ISOPTIN use. **Adverse Reactions:** Hypotension (2.9%), peripheral edema (1.7%), AV block, 3rd degree (0.8%), bradycardia HR < 50/min (1.1%), CHF or pulmonary edema (0.9%), dizziness (3.6%), headache (1.8%), fatigue (1.1%), constipation (6.3%), nausea (1.6%), elevations of liver enzymes have been reported. (See *Warnings.*) The following reactions, reported in less than 0.5%, occurred under circumstances where a causal relationship is not certain: ecchymosis, bruising, gynecomastia, psychotic symptoms, confusion, paresthesia, insomnia, somnolence, equilibrium disorder, blurred vision, syncope, muscle cramp, shakiness, claudication, hair loss, macules, spotty menstruation. **How Supplied:** ISOPTIN (verapamil HCl) is supplied in round, scored, film-coated tablets containing either 80 mg or 120 mg of verapamil hydrochloride and embossed with "ISOPTIN 80" or "ISOPTIN 120" on one side and with "KNOLL" on the reverse side. Revised August, 1984 2385

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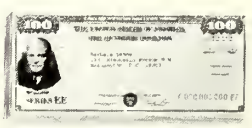


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Health Care Data and the Computer Age

Guest Editorial

CLEMENT J. McDONALD, M.D.
Indianapolis



COMPUTER-STORED MEDICAL histories have been around since 1964 when Slack, Hicks and Van Cura began their pioneering work at the University of Wisconsin. Investigators from other institutions (Mayo clinic,[1] Latter Day Saints Hospital,[2] and others) have developed a general history as well as a specialized history for nutrition, headache, venereal disease, allergies and optometry.[3,4,5,6,7]

Since his initial work, Slack has developed a full history-taking language called CONVERSE that produces hierarchical questionnaires with sophisticated branching. The series of questions asked can depend upon factors such as the time it takes a patient to answer a question, the patient's pulse rate, as well as the answers to previous questions. Slack and his coworkers have developed histories in CONVERSE for general medicine problems, headache, epilepsy, psychiatry. They have even developed a questionnaire for urinary tract infections that allows patients to choose their own therapy.[8]

Despite these academic successes, attempts to commercialize computer-driven history systems have generally failed. Today, very few physicians use them in their actual practice. Why?

From the Indiana University School of Medicine and Regenstrief Institute, 1100 W. Michigan St., Indianapolis, Ind. 46223.

When computer histories were first marketed, computer hardware and terminals were quite expensive. A 1960s video terminal cost more than a hard disk microcomputer does today. But, the systems that were installed when the academic successes were first publicized could not be cost justified, and their reputation of costliness has lingered, perhaps unfairly. And there is another problem. Computer histories, even with sophisticated branching, are not as "good" as physician-taken histories.[9]

The multiple choice nature of the histories tend to force respondents into a particular mold. The medicine clinic at Cook County Hospital invested in computer-taken histories when I was a resident there 15 years ago. The computer duly reported sternal crushing chest pain lasting two hours until relieved by morphine on one of my patients. By all accounts, an acute myocardial infarction. The patient was actually answering questions about a broken rib that occurred during an automobile accident in which his chest struck the steering wheel column. But, he had no chance to describe these circumstances in the computer-taken history. The time the computer saves the physician by taking the history is lost in part by the time the physician must spend in correcting it.

In contrast, patient-administered check lists are widely used in day-to-day office practices, employment physicals and the military services. These tend to focus on the review of systems, social history, past history and family history questions, and leave the gathering of the present illness to the physician. In my view, these are most successful when the questions are short (sometimes simply lists) and the entire history fits into one or two pages. In this case, physicians can annotate the original report and use it as the final history form. The check list

saves physician time and assures that no important questions are overlooked.

Darbro ("Health Care Data: A Hi-Tech Medical History in 1,024 Bytes") combines the advantage of the paper check list with the storage and retrieval capabilities of a computer history. He uses an optical reader to enter a patient's responses to a paper check list questionnaire into a computer. This approach has also had some commercial success and I expect that, as microcomputers become more prevalent in office practices, completion of a paper history form (at least for the more rote parts of the history such as the review of systems, allergies, etc.) with later transcription into the computer will become the rule. However, I'm not sure it will follow exactly in the mold proscribed by Darbro. There are trade-offs between the number of questions and the validity of the answers. A thousand detailed questions is too much. A few hundred (or fewer) more general questions could be more easily answered and reviewed. It is also possible that manual entry of the patient's responses could be competitive with Darbro's optical reader. Remember, with proper defaults, only positive responses would need to be entered and positives are the exceptions. Moreover, a good typist can enter over 10,000 characters per hour.

Dr. Darbro's article appears on the next page.

Darbro has used energy and imagination in his approach to history-taking. He is in the forefront of what I believe is a strong trend toward greater clinical use of computers in the office practice.

REFERENCES

1. Mayne JG, Weksel W, Sholtz PN: Toward automating the medical history. *Mayo Clin Proc*, 43:1-25, 1968.
2. Warner HR, Rutherford BD, Houtchens BA: A sequential Bauesian approach to history taking and diagnosis. *Comp Biomed Res*, 5:256-62, 1972.
3. Greist JH, Klein MH, Van Cura LJ: A computer interview for psychiatric patient target symptoms. *Arch Gen Psychiatry*, 29:247-53, 1973.
4. Evans S, Gormican A: The computer in retrieving dietary history data. *J American Dietetic Association*, 63:397-407, 1973.
5. Stead WW, Heyman A, Thompson HK, Hammond WE: Computer-assisted interview of patients with functional headaches. *Arch Intern Med*, 129:1-12, 1972.
6. Van Cura LJ, Jensen NM, Griest JH, Lewis WR, Frey SR: Venereal disease: Interviewing and teaching by computer. *Am J Public Health*, 65:1159-64, 1975.
7. Marg E, Liberman G, Crossman EFRW: Towards computer-assisted optometry. *Optometric Weekly*, 1-5, Nov. 1969.
8. Slack WV: A history of computerized medical interviews. *MD Computing*, 1(5):52-59, 1984.
9. Hickam DH, Sox HX, Sox CH: Systemic bias in recording the history in patients with chest pain. *J Chronic Dis*, 38:91-100, 1985.

Look-Alike and Sound-Alike Drug Names

BENJAMIN TEPLITSKY, R. PH.
Brooklyn, N.Y.

Look-alike and sound-alike drug names can be misinterpreted by a nurse reading doctors' orders or by a pharmacist compounding physicians' prescriptions. Such misunderstandings can result in the administration of a drug not intended by the prescriber. Awareness of such look-alike and sound-alike drug names can reduce potential errors.

	TRIFLUOPERAZINE	TRIFLUPROMAZINE
Category:	Antipsychotic	Antiemetic/Antivertigo
Brand Name:	Stelazine, SKF	Vesprin, Squibb
Generic Name:	Trifluoperazine	Triflupromazine HCl
Dosage Forms:	Tablets, Injection, Concentrate	Suspension, Injection

	METAXALONE	METOLAZONE
Category:	Muscle relaxant	Diuretic
Brand Name:	Skelaxin, Robins	Diulo, Searle Zaroxolyn, Pennwalt
Generic Name:	Metaxalone	Metolazone
Dosage Forms:	Tablets	Tablets

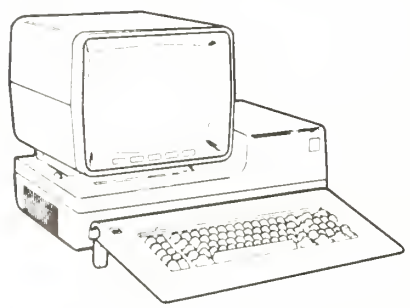
HEALTHCARE DATA

A Hi-Tech Medical History in 1,024 Bytes

DOUGLAS A. DARBRO, M.D.
Greenwood

THE MEDICAL HISTORY is a record of everything relating to a person's past, present and future health. It is the same basic information needed by employers for the employee health profile, insurance companies for risk assessment, or by health organizations and physicians for health care.

Most medical efforts use the history as a tool to diagnose and treat a patient's current problem. Less emphasis has been placed on discovering other potential but less pressing problems that might be more significant in the long-term. The reason is that it is very costly and time-consuming for a physician to obtain and record all this information.



However, with the move toward providing more cost-effective health care, there is a growing interest in preventive medicine in order to minimize health care expenditures. The information contained in the medical history is of the utmost importance in initiating the practice of preventive health care. The history must be as complete and detailed as possible if it is to be effectively used to detect and prevent health care problems.

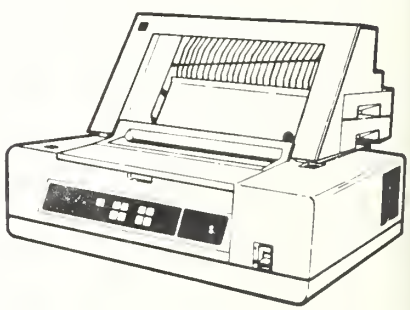
Correspondence: 5311 Mount Pleasant, North Drive, Greenwood, Ind. 46142.

Physicians are then faced with eliciting and recording complete "medical school" histories on all patients. This is something we may not have the time to do as thoroughly as we would like. Since I have a background in electronic engineering and computers, I looked into the possibility that the computer might be helpful in solving our problem of data collection and documentation.

A review of the available literature revealed methods that required either an interviewer or a patient to use an on-line computer terminal to respond to computer-generated questions. Most of these seemed intent on diagnosing but not necessarily on collecting data. While this may be effective, it ties up some expensive equipment most of us don't have and it can be rather intimidating to a patient. With this in mind, I undertook to develop a means of obtaining and recording all these data in the least expensive and most efficient manner.

The first step was to formulate and standardize the medical history. I reviewed dozens of histories ranging from the Cornell Medical Index of 1949 to everything found in the sophomore medical texts. I distilled it all down to a compilation of the 1,000 most significant medical questions. These questions explore everything from the organic and psychological to a person's health risks in great detail.

The next and crucial step was to develop a simple, fast means of entering data. Data have had to be entered into record-keeping systems laboriously and expensively by the type-it-all-in method. This can easily lead to expenses of two to three times the initial cost of a computer itself. Certainly, this did not seem practical in terms of time or money savings, so I explored alternatives. Since the object is to use the computer to solve our problem of data collection, why not use it to extract the information in the first place?



An optical reader was interfaced to a computer so that a computer form similar to those used for school tests could be used to enter the data (*Table 1*). The patient or the patient's family answers the questions and completes the form (at home, in usually less than 45 minutes) and returns it for processing. The advantages are that not only is the patient more likely to correctly respond when he can take his time to reflect on his answers but this is a simplified datum entry method which allows for the fastest, easiest and least expensive data handling. This makes it practical to have a detailed history on all patients.

The next part of the solution was to develop software for the computer to

TABLE 1

Doctor's Medical Health Questionnaire

(Note: Only a portion of the actual questionnaire is shown below. Copyright 1985, Douglas A. Darbro, M.D., Inc. All Rights Reserved.)

This STRICTLY CONFIDENTIAL questionnaire is intended to help you and your Doctor. Complete it to the BEST of your ability.

>On the computer sheet, using a NUMBER 2 PENCIL ONLY, in the section marked "NAME," print your LAST NAME, then your FIRST NAME and then your MIDDLE NAME.

>Print your street ADDRESS in the "SUBJECT" section.

>In the "HOUR" section, print the name of your CITY. Use the space below the "HOUR" section to print your STATE and ZIP CODE.

>Fill in your BIRTHDATE (month, date and year) in the "DATE" section.

>Below the "DATE" section, write your TELEPHONE NUMBER.

>In the clear space below the "HOUR" and "DATE" sections, write down the name of ANY PRESCRIPTION MEDICINE, OVER-THE-COUNTER MEDICINE, VITAMIN or SUPPLEMENT you are regularly taking. Write down the strength of one pill in MG (in milligrams). Write down how many pills you are taking at one time. Then write down how many times a day you are taking the pill(s) or preparation.

>Below the Medicines, write down ANY OPERATIONS, PROCEDURES or other HOSPITALIZATIONS you have had. Please give the YEAR(S) of these.

>USE NUMBER 2 PENCIL ONLY AND MARK FIRMLY. BE CAREFUL TO MARK ONLY THE CORRECT BOX OR BOXES CORRESPONDING TO THE QUESTION YOU ARE ON. Take your time. Do the questionnaire in several sections with rests in between. When finished, carefully go over it again to double-check everything. LEAVE BLANK ANY SLOTS THAT DO NOT APPLY TO YOU.

>If you check any "OTHER" or "SOMETHING ELSE" boxes in the questionnaire, write down what you mean on the computer sheet in the clear space.

Mark ANY boxes with the pencil IF the question applies to you.

1. ARE YOU: A. male B. female C. American Indian or Alaskan native D. Black E. White
2. A. Oriental, Asian or Pacific Islander B. Hispanic C. Not sure of race D. right handed E. left handed
3. A. single B. widowed C. married once D. married twice E. married three or more times
4. A. separated B. divorced within the last year C. divorced over a year ago D. never married E. planning marriage soon
5. A. working in a factory B. a homemaker C. working in an office D. a professional E. a student
6. A. self-employed B. presently unemployed C. retired D. looking for a job E. working 1st shift (day)
7. A. working 2nd shift (night) B. working third shift (early morning) C. a graduate from high school D. a four year college graduate E. a graduate from graduate school
8. ARE YOU: A. a native-born citizen of the USA B. living alone C. a twin D. a Veteran of the military E. a Vietnam Veteran
9. A. working outdoors B. mostly happy in your work C. mostly happy in your life D. mostly unhappy in your work E. mostly unhappy in your life
10. MARK IF APPLIES: A. you comfortably sleep 6 hours or less at night B. comfortably sleep around 8 hours a night C. need 9 or more hours of sleep at night to feel rested D. most nights sleep well E. most nights don't feel rested when you get up
11. MARK IF APPLIES: A. right now, you feel the worst ever in your life B. right now, you feel a little below average C. right now, you feel average D. at the present time, you feel a little above average E. now you feel the best ever in your life
12. WHAT DO YOU THINK YOUR MOST BOTHERSOME MAIN MEDICAL COMPLAINT RIGHT NOW INVOLVES: (MARK ONLY ONE FOR QUESTIONS 12-18) A. eyes B. head C. ears D. thyroid E. throat
13. A. nose B. neck glands or lymph glands C. teeth D. gums
14. A. your lungs B. heart C. upper chest D. lower chest E. breast or breasts

TABLE 2
Print-Out of Patient's Medical History

(Note: Only a portion of the actual print-out is shown below.)

SARA IAMA SAMPLE
100 ANY STREET
ANYVILLE, IN 46000
555 - 1 2 1 2

Birthday: 1 23 - 1935 AGE: 50.7
Date processed: 10-09-1985 For Doctor:
DOUGLAS A. DARBRO MD

MEDICINES: NALFON 300MG T QID
DARVOCET N-100 T Q4-6HRS PRN
CEVALIN T QD WEIDER MULTIVIT T TID

PROCEDURES OR HOSPITALIZATIONS:
CHILDBIRTH '61 MISCARRIAGE '64

OTHER: SEVERE STERNAL CRUSHING CHEST PAIN FROM AUTO ACCIDENT '52

ALLERGIES
bee stings, food coloring dyes, penicillin,

PATIENT PROFILE
female, Caucasian, right handed, married twice, divorced within the last year, a factory worker, working 1st shift, high school graduate, born in USA, mostly happy with work, mostly happy with life, does fine with around 8 hours rest, feels average,

CHIEF COMPLAINT
arms or legs, lasting more than one year, dull pain, achy pain, comes on if eats certain foods, comes on if doesn't get enough rest, saw Doctor about this in last 6 months and was treated, this is about the same,

CARDIOVASCULAR AXIS
PAST MEDICAL HISTORY: high blood pressure,
PROCEDURES:
FAMILY HISTORY: high blood pressure,
REVIEW OF SYSTEM: increased sensation of body part, decreased sensation of body part, night leg cramps, varicose veins,
RISKS: eats sweets regularly, drinks more than one soda a day, sidestream cigarette smoke exposure, eats red meat daily, gained 10 pounds or more in last year, no complete physical exam in last 2 years, father died of MI before 60,

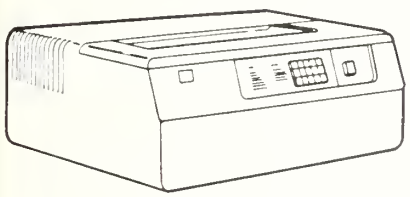
CANCER AXIS
PAST MEDICAL HISTORY: coughing up blood, abnormal chest x-ray, had abnormal pap smear,
PROCEDURES:
FAMILY HISTORY: cancer,
REVIEW: skin lesion or wound that healed slowly, general tiredness more than expected, recurrent bronchitis, frequent diarrhea or watery stools, dull abdomen pain, post-coital bleeding,
RISKS: sidestream cigarette smoke exposure, avoids eating raw vegetables daily, eats red meat daily, gained 10 pounds or more in last year, frequent bare skin sun exposure, not had annual medical symptom review with physician, not had annual rectal after age 40, not had annual pap smear, not checked monthly for breast lumps, no complete physical exam in last 2 years, some other immediate family developed cancer before age 50, had exposure to chemicals, had shingles in last year, had exposure to asbestos,

PULMONARY AXIS
PAST MEDICAL HISTORY: coughing up blood, abnormal chest x-ray,
PROCEDURES:
FAMILY HISTORY:
SYSTEM REVIEW: recurrent bronchitis,
RISKS: hasn't smoked for a year or more, sidestream cigarette smoke exposure, avoids eating raw vegetables daily, no complete physical exam in last 2 years, had exposure to chemicals, had exposure to asbestos,

GASTROINTESTINAL AXIS
PAST MEDICAL HISTORY: more than 10 pounds overweight, hemorrhoids, nervous stomach, diverticulosis or diverticulitis,
PROCEDURES: upper GI, lower GI, vitamin or B12 shots,
FAMILY HISTORY: sugar diabetes,
SYSTEM REVIEW: general tiredness more than expected, frequent or constant thirst, gain of 10 pounds or more this year, frequent diarrhea or watery stools, hemorrhoids, dull abdomen pain,
RISKS: eats sweets regularly, drinks more than one soda a day, avoids eating raw vegetables daily, eats red meat daily, regularly snacks between meals, gained 10 pounds or more in last year, not had annual rectal after age 40,

GENITOURINARY AXIS
PAST MEDICAL HISTORY: pregnant twice, one miscarriage, has one living child, had abnormal pap smear, had pelvic inflammatory disease, heavy periods,

read the data from the form, interpret it, process it, and print and save it in computer bits and bytes. Extensive IBM compatible programs were written, debugged and perfected to read, collate, print and record all the data.



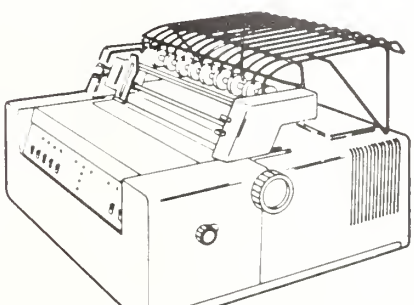
First, the form is read by computer and the data are analyzed and sorted according to preprogrammed algorithms. The entire history of 1,000 questions is reviewed by computer for significant patient responses to each of 14 major medical axii. These include: Cardiovascular, Cancer, Pulmonary, Gastrointestinal, Genitorinary, Neurological, Musculoskeletal, Psychological, Hematopoietic, Integumentary-Allergy, Endocrine, Eye-Ear-Nose and Throat, Infectious Disease and Miscellaneous Axis. Each axis is further broken down into sub-headings of: Past Medical History, Procedures, Family History, System Review and Risks. The computer also scans the patient's risk factors and suggests what the patient can do to minimize them.

Now that I have used this system for several months, I have been able to develop histories on several hundred patients. Certainly, there is considerable advantage in knowing that all patients have answered the same standard questions and that I haven't forgotten to ask something of paramount importance. After the history is processed, I initially review the print-out (*Table 2*) with the patient in order to validate it. Any clarifications, elaborations or addendums are then made. Of course, there is no way (even by direct interview) to get information that a patient wishes to withhold.

I find that by having the history print-out, I can quickly focus on the most important problems, make a problem list and arrange for any indicated work needed such as tetanus shots, paps, heme-stools, blood work, etc. The problem list always greets me on subsequent patient returns and allows me to get oriented quickly as to the problems at hand. Particularly on new patients, I find that going over the computerized history is preferable to reviewing an old two-inch-thick medical record.

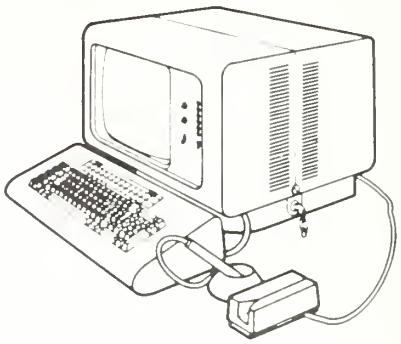
I intend to get histories on all my patients and I offer them the history service as they routinely return to the office. Most of them consider this a unique opportunity to have a stake in their own health care. They seem to be flattered to participate in the assemblage of this extremely vital information about themselves and they are pleased to get a copy of it.

The print-outs have ranged from a simple two pages to a "Cecil and Loeb positive" five pages. Nonetheless, I have always learned something about



even my oldest, best known patients that I had not previously known. Indeed, by seeing chuckholes in the road ahead detected by the history, I have been able to avoid them and render better treatment. As that wise, old physician once said: "Listen to your patients long enough, my son, and they will tell you what is wrong with them." There just is no substitute for the information derived from a complete history.

There is a nominal charge to patients for the preparation of their medical histories. This seems to encourage them to carefully prepare the forms and return them for processing. The



patients are also told that they will get a copy of their history for their own records. They seem to like having it so that if they travel out-of-state or find themselves in an emergency room they will be able to provide their history to any physician in order to help him help them. Any health or life-style risks are identified on the history and discussed during my interview with them.

Of course, another advantage to all this is that a considerable database is very quickly generated. It is possible to use this database in a relational way to extract patient demographics. Just what is the patient population disease distribution, the age distribution, the combination of interesting factors that may be discovered by careful analysis? With this system, birthday lists, recall lists, etc., can be prepared without the expenditure for computer equipment or costly data entry. One is limited only by his imagination and ingenuity in dealing with this valuable information. Medicine is just now on the threshold of realizing the immense benefit that the computer will bring to it.

REFERENCES

1. Rodgers W, Ryack B, Moeller G: Computer-aided medical diagnosis: Literature review. *International J Biomed Comput*, 10(4):267-289, 1979.
2. Cannon SR, Gardner RM: Experience with a computerized interactive protocol sytem using HELP. *Computer Biomed Research*, 13(5):399-409, 1980.
3. Fox J, Barber D, Bardhan KD: Effects of on-line symptom-processing on history-taking and diagnosis: A simulation study. *Int J Biomed Comput*, 10(2):151-163, 1979.

The Student Inquires

Commentary

JAMES Y. McCULLOUGH SR., M.D.
New Albany

"Doctor, you may remember my grandfather. He greatly admired you."

"Oh yes, certainly, he was valedictorian of his class of 1907. I believe he told me that he had three brothers on the farm and that each had helped the other laying out to teach school at Little York until all graduated from a university: Purdue, I.U. and U. of L. Your grandfather went to Casey to practice I believe. Is he still there?"

"No, a couple of experiences motivated him to move to the city. You might be interested in hearing of them."

"Yes, of course, go on."

"He had just recently bought a brand new Ford with bright brass radiator and acetylene lights but found the next winter that he couldn't drive the car because of the mud roads and had to go by horse and buggy to care for his patients in the winter time. On this particular day he went on an obstetrical case and had to stay two days; upon his return, a flash flood had weakened the board bridge so that it collapsed by the weight of the team of horses and the rushing current. He was thrown into the creek and was able to save himself by grasping a sycamore limb hanging over the rushing waters and was able to pull himself out and up the creek bank. He lost the team of horses and the buggy he had hired. I think he was more concerned about losing the team than his close call. The next summer he was riding his bicycle, as he occasionally did in town, and while returning home from a night call his front wheel went into a pothole on the road and he was thrown over the handlebars and cut his face and lost a tooth.

"While washing his wounds, he said to my grandmother Mabel, 'We're moving to the city where there are trolley cars and passable roads.' "

"I think your grandfather had good reason for the change."

"How is your father now?"

"He died of typhoid fever."

"And your mother?"

"She's living but has the after effects of rheumatic fever; mainly, mitral stenosis. We lost my sister of scarlet fever."

"Umm. All are now preventable or curable."

"Doctor, I want to go to medical school and I came to get your counsel."

I suddenly found that I could not as easily give him an answer as I had done with others asking the same question a few years previously. A multitude of diverse thoughts crossed my mind as I observed this young man, well qualified and sure, and possibly also thinking that I knew it all, or at least, appeared to have been here from the beginning of time. I suddenly felt older than my 75 years.

Clearly, medicine has encountered problems and there are more in store. I could not organize all the medical and paramedical ramifications, but I strained to help my young friend. While wrestling with the responsibility that he must assume, I found my answer when I realized that I envied him and would like to be in his place despite the uncertain future imposed with the advent of competition among hospitals, DRG, private and commercial hospital-based insurers and the government itself, a third-party payer, each with a plan.

We are now, unfortunately, faced with malpractice premiums mandating consideration in the cost of medical care.

It occurred to me to ask why he wanted to go into medicine. His answer: "I'm interested in biochemistry and like math which may be a help to me in my study of medicine today."

I was relieved. I would have been disappointed if his reply had simply been, "I want to help my fellow man," for this should be innately understood by anyone going into the profession.

However, he is entering a different world than I knew at his age. The explosion in chemistry and in biologic and physical science has carried medicine into a technology which warns me not to prognosticate, as I may have risked only a few years ago.

Of course, the virtues and responsibilities, triumphs and anxieties have always been present and he will have to contend with errors and acknowledge them. He should be wedded to his profession, be possessed in his desire to satisfy the obsession to achieve and excel. He will need discipline to consider his patient rather than himself. He may have government agencies and hospital financial restrictions. How can I explain the fact that the profession

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has undergone scrutiny, if not attack? Yet the patient continues to hold his personal physician in high regard.

The art, the bedside diagnosis, the human touch, and the adulation of the patient and family for their personal physician has suffered. We are a permissive society. Consider that the government, while spending millions of dollars on research for the public health, subsidizes the tobacco industry and at the same time spends innummerable dollars through Medicare and Medicaid to subsidize hospitals in the United States for the care of thousands of patients suffering from preventable disease caused by smoking and preventable injuries resulting from carnage on the highways and crime in the streets.

"Yes, I have bored you, but wait young man, hear me out.

"We are also a compassionate society as well as a violent one. The quality of medical care is greatly superior to that of my generation and the quality of life is proportionately greater. Remember typhoid fever, diptheria, rheumatic fever, scarlet fever, rubella, pertussis, anterior poliomyelitis, tuberculosis, meningicoccic meningitis, pneumonia, mastoiditis, osteomyelitis, smallpox and syphilis. All gone or under control. Unbelievable but true!

"Consider the geometric progression in physical science, quantum mathematics, computed tomography, digital vascular imaging (DVI), the computer assisted noninvasive study of blood vessel health, magnetic resonance (NMR) and a procedure called positron emission transaxial tomography (PETT).

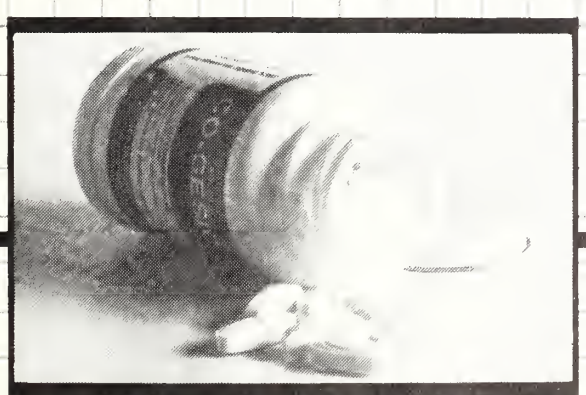
"As for your interest in biochemistry; since Mendel discovered that a simple character is regulated by two particles which we now call genes, no greater advance in biochemistry has occurred in this century than the discovery in 1953 by James Watson and Francis Crick of the chemistry (DNA) of genes and their structure (the double helix). Consider the tree for it is your cousin.

"Yes, young man, all of this may be yours. But knowledge is not a lot of pages in a book. The future depends on intellect and responsibility for integrity. Unless we have both we may be replaced by another culture. Nature has given us no guarantee of survival, just as Greece or Rome had none."

"Thank you, doctor."

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The Corporatization of Medicine: Is There a Silver Lining?

RICHARD M. NAY, M.D.[1]
E. HENRY LAMKIN JR., M.D.[2]
JOHN KNOTE, M.D.[3]
ROBERT E. IVANCEVICH, MBA[4]

Physicians Must Act Boldly and Quickly to Create a Silver Lining in the Dark Cloud of Change That Is Affecting the Way Medical Care Is Organized, Financed and Delivered. . .

[1]Practicing cardiologist in Indianapolis and founder of the Meridian Medical Group; chairman, Physicians Medical Alliance.
[2]Practicing endocrinologist in Indianapolis; past state representative and House majority leader; president, Physicians Medical Alliance.
[3]Practicing radiologist in Lafayette; past president, Indiana State Medical Association; member, Board of Directors, Physicians Medical Alliance.
[4]President, Physicians and Hospitals Alliance of Indiana. MBA from the Kellogg School of Management at Northwestern University; extensive background in health care policy, management and consulting.

LIKE IT OR NOT, practicing medicine may never be the same. Criticisms of the cost of health care, corporate activism, pressure from government, and efforts by management companies and chains of hospitals to institutionalize health care are creating unprecedented and sometimes unacceptable change in the way medical care is organized, financed and delivered. In this period of dramatic change, quality medical practice is more vulnerable than ever. But within this dark cloud of change, with its forboding message that physicians may become powerless operatives in the corporate morass, there is an opportunity to create a silver lining. The ideal is for the physician to recapture various prerogatives of medicine which are in danger of being usurped by corporate entities and by government.

In this era of continuous change, physicians must recognize that it is they who hold the key to the success of any program. As profound as it may seem and as unlikely as physicians are to admit it, they are in a better position today than ever to shape the future of medicine by selectively participating in programs that meet certain criteria. The tragedy for medicine will come when undesired medical institutions become a reality simply because every physician joins every program to assure himself that he will not be left out.

By being selective in their choice of organizations, physicians can have a very real effect on the outcome of medical institutionalization. Insurance companies and HMO managers can only market what physicians alone provide—care of patients. Those non-health care providers' only control is access to patients. But physicians can decide whether they are willing to accept a given organization's control in exchange for their services.

Complex corporate medicine is confusing and runs against the grain of what most physicians have been taught as practitioners. It is believed by some to threaten the very essence of what is good about medicine: that medical care should be provided compassionately, with concern for healing and the patient's welfare put before economics. However, the opportunity for physicians to be selective about which programs they condone through their participation and to take a dominant role in charting the course of medical institutionalization will not be available for long.

Analysts project that, in the foreseeable future, 10 to 20 corporations will direct substantially all health care in America. Physicians have the power (if they choose to exert it) to assure that at least one, and hopefully more, of those corporations is owned and/or directed by physicians and is capable of putting good medicine before economics. Physicians must act boldly and soon to shape the course of events.

Physicians Can Shape the Future by Being Selective

There are several opportunities for physicians to join, invest in and/or contract with so-called alternative delivery systems. Physicians cannot be blamed for joining every one of these organizations that comes along. Their hope is that by participating in all offerings, some will become successful and they will be a part of them. But physicians must recognize that they can and must be selective by participating in programs that are bona fide M.D.

organizations with doctors making decisions about medical care—and some administrative decisions. A program that today might boast 4,500 MDs couldn't exist if only 20 physicians had originally decided to participate. Physicians should seriously question whether they want to be a part of programs that present a real threat to medicine. Otherwise, passive participation in those that are undesirable will only serve to strengthen the poor programs. The very principles medicine detests will then be bolstered through benign neglect.

Simplifying a Complex Selection Process

The physician presented with an opportunity to participate in one of these programs faces a complex decision. In almost all cases a contract that establishes the terms and conditions of the physician's participation in the program is involved. In every case, physicians must recognize that the relationship with the patient will be modified by the entity with which the contractual relationship has been established.

The following questions are not designed to serve as criteria by which physicians can evaluate contracts. We believe that job is better left to the physician and legal counsel. However, they serve to provide a type of rating system the physician can use to determine whether a program in which participation is being contemplated does, in fact, provide an adequate role for physicians. Questions regarding whether the organization provides the necessary physician involvement in the program for the interest of good medical care and the patient can be answered in this way.

We recommend that you have these questions answered to your satisfaction before you join:

1. **Do physicians take a substantive role in the management of the business?**

Physicians are frequently criticized as poor administrators and managers. There probably is some truth in this. In reality, physicians have little desire to be managers. Most wish to practice medicine. But it is also true that there are physicians who have both the ability and interest to exert effective management direction into these organizations. A physician considering participation in a program should evaluate what type of involvement physicians have in both the governance and management of the program. This is not to say that the chief operating officer must be a physician, but that management does work on a daily basis with direct physician involvement and leadership.

2. **Does an outside, non-health care entity control the business?**

Some programs are joint ventures of physicians and/or hospitals and outside organizations such as consulting/management firms and chains of hospitals. In some cases, those outsiders have substantial ownership and control of the business. Those entities control the enrollees (patients) and, if forced to for economic reasons, can take the business elsewhere to providers who are prepared to agree to a "better" arrangement. Also, the outsider frequently assumes absolute authority over matters in which providers should have major influence or control (such as physician recruitment, product/benefit design, utilization review, precertification, second opinion programs, disciplinary programs). In our opinion, physicians should be cautious about participating in programs intended to eventually control medicine. We must avoid the programs that flaunt the "hire a doctor" philosophy. Are we the kind of people who will simply sell our services to any program with a nice smile and a reasonably large billfold?

3. **Are you an owner, a member of a not-for-profit organization or contractor?**

Numerous relationships exist. Remember, when no ownership is involved, you have no say regarding the design of the business and little opportunity for direct benefit from its success. The owner can always reopen the contract, renegotiate terms or cancel the contract and take the business elsewhere. The story of the multispecialty group in one state that had a contract with an HMO comes to mind. Several years into the relationship, more than 70% of the group's patients came from the HMO. At contract renegotiation time, the HMO, recognizing its importance to the group, put it bluntly: Reduce fees or we'll take the business elsewhere! Be sure you know who "owns" the business and be willing to accept the consequences of the program being "successful." Success will take on different meanings to different parties.

4. **Does the program have a full product line? Will employers have their needs met in one sales encounter? Is the program able to address all the product needs of the market?**

Employers are facing alternative health benefit programs including HMOs, PPOs, IPAs, etc. Eventually, time and resources will prevent them from seeing representatives of every program. Marketing representatives will be more efficient if they can meet all the needs of the employer.

Many physicians become participants in limited programs designed to serve a specific share of the market. HMOs are a prime example. While this may make sense in some communities, physicians should elect to participate in a combination of programs that complement each other by offering a full product line. Participation in competing programs may not provide a real benefit. Sooner or later you must pick your winner.

5. **Is the program controlled locally?**

Local control is important. Before participating, ask yourself if the program is controlled locally or by some nameless managers in Texas, New York, or elsewhere.

6. **Who develops and revises the**

"medical logic" that will be used for utilization review programs?

The success of the utilization review program will directly affect the success of the program. But, the medical logic upon which the program implements pre-certification, second opinion programs and concurrent and retrospective utilization review must be developed by participating physicians, locally. Be cautious of any program that uses norms of care established elsewhere and by non-physicians. Ask yourself if the judgments regarding physician professional performance will be made by your peers or by less qualified individuals using "cookbook medicine?"

7. Does the program demonstrate a commitment to excellence by selecting the best physicians as participants?

The success of the program will be based upon the quality of the physicians involved. Selective participation must include physicians concerned and willing to provide value-oriented care. Believe it or not, low price and economics alone won't assure success. The name of the game is value. Value is the proper combination of price and quality.

Perhaps It Is Not Too Late!

Joining every program may not yet have done irreparable harm. Physicians can always resign from programs they believe to be harmful. However, doing this must be an individual decision and not a concerted one. If enough individuals make such a decision, they have the power to shape the future. But the opportunity to exert that power will be short-lived.

Convention Proceedings to be Published Next Month

The proceedings of the 136th Annual Meeting of the House of Delegates, Indiana State Medical Association, conducted last month in South Bend, will be published in next month's issue of INDIANA MEDICINE. Included will be convention photographs, results of elections, resolutions, and various annual reports. We'll also list the new members of the ISMA Fifty Year Club, scientific exhibit winners and this year's recipients of the ISMA Journalism Awards.

CME QUIZ

TO OBTAIN ONE HOUR OF CATEGORY 1 AMA CME CREDIT, answer the following questions by circling the correct answer on the answer sheet below. Complete and clip the application form and mail it to: Indiana University School of Medicine, CME Division, Fesler Hall 221, 1120 South Dr., Indianapolis 46223.

Oncogenes . . .

CONTINUED FROM PAGES 1081-1085

1. Oncogenes are genes that:
   a. are present in all virus-infected secretions
   b. have intervening sequences
   c. are identical to proto-oncogenes except that they have introns
   d. all of the above
   e. none of the above are correct
2. Transfection involves experimentally:
   a. altering the phenotype of a cultured cancer cell *in vitro*
   b. altering the genotype of a cultured cancer cell *in vitro*
   c. altering the growth of a normal cell *in vivo*
   d. infecting normal cells with viruses *in vitro*
   e. infecting cancer cells with viruses *in vitro*
   f. answers a and b are correct
   g. answers d and e are correct
   h. none of the above are correct
3. Proto-oncogenes can be activated:
   a. during embryonic life
   b. during adult life
   c. both are correct
   d. both are incorrect
4. The products of proto-oncogenes:
   a. give rise to oncogenes which are growth regulators
   b. are oncogenic to normal cells
   c. are probably important as physiological regulators of growth and development
   d. are probably important during differentiation
   e. a and b are correct
   f. c and d are correct
5. Proto-oncogenes can be activated by:
   a. retrovirus infection
   b. structural alterations in the gene (point mutation)
   c. altered regulation of the proto-oncogene
   d. gene amplification
   e. all of the above
   f. only a and c are correct
   g. only b and d are correct
   h. none of the above
6. Chromosomal translocations:
   a. may regulate the level of proto-oncogene activation
   b. allow normal cells to be more susceptible to virus infections
   c. are induced by proto-oncogenes
   d. may be induced by oncogenes
7. Oncogene products are:
   a. a new generation of investigational anticancer agents
   b. ribosomal RNA proteins
   c. reverse transcriptase enzymes in tumor cells
   d. proteins that bind virus particles
   e. a and c are correct
   f. b and d are correct
   g. none of the above
8. Collaborating oncogenes are those oncogenes that:
   a. collaborate to produce proto-oncogenes
   b. are intimately involved in the life cycle of virus that infect cells
   c. collaborate to reject virus infections in normal cells
   d. contribute to distinct traits in tumor cells
   e. contribute to distinct traits in normal cells
   f. b and d only are correct
   g. c and e only are correct
9. A promoter is:
   a. a region in mRNA that promotes oncogene activation only "downstream" from an oncogene
   b. usually upstream from all genes
   c. often involved in oncogene activation
   d. a and b are correct
   e. c and d are correct
   f. none of the above
10. Oncogene products may stimulate growth by:
    a. their action on a growth factor gene
    b. their tyrosine kinase activity
    c. binding to GTP and GMP within cells
    d. acting as growth factor receptors
    e. all of the above

NOVEMBER CME QUIZ Answers

Following are the answers to the CME quiz that appeared in the November 1985 issue: "Brain Stem Tumors," by Kenneth A. Levin, M.D., *et al.*

1. b	6. b
2. b	7. a
3. b	8. d
4. c	9. b
5. b	10. c

Answer sheet for Quiz: (Oncogenes. . .)

1. a b c d e	6. a b c d
2. a b c d e f g h	7. a b c d e f g
3. a b c d	8. a b c d e f g
4. a b c d e f	9. a b c d e f
5. a b c d e f g h	10. a b c d e

I wish to apply for one hour of category 1 AMA Continuing Medical Education credit through the I.U. School of Medicine. I have read the article and answered the quiz on the answer sheet above. I understand that my answer sheet will be graded confidentially, at no cost to me, and that notification of my successful completion of the quiz (80% of the questions answered correctly) will be directed to me for my application for the Physician's Recognition Award of the American Medical Association. I also understand that if I do not answer 80% of the questions correctly, I will not be advised of my score but the answers will be published in the next issue of INDIANA MEDICINE.

Name (please print or type)

Address

Identification number (found above your name on mailing label)

Signature

To be eligible for this month's quiz, send your completed, signed application before Jan. 10, 1986 to the address appearing at the top of this page.



AUXILIARY REPORT

Muriel Osborne (Mrs. John)
ISMA Auxiliary President 1985-86

A SHARING CARD? What is it? What is the purpose?

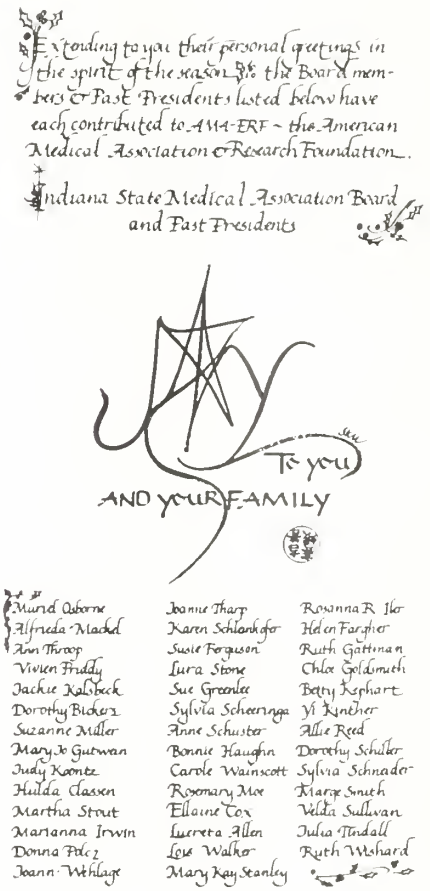
Members of the medical auxiliary and their physician spouses, instead of sending holiday greetings to each other, send a contribution to the American Medical Association Education and Research Foundation (AMA-ERF) as their way of saying "Happy Holidays to you and your family."

One greeting card listing the contributors is sent to every member of a medical society so all physicians and their spouses become acquainted with the program. The selling point is that you do not need to send cards to each other because the "Sharing Card" wishes all a Happy Holiday and performs a service for the members.

All contributions are tax deductible. The cost of the greeting card and postage are budgeted or raised by a separate fund raising event. Expenses are not deducted from the contributions. The Sharing Card is the most widely used, totally tax deductible AMA-ERF fund-raiser to date.

The purpose of the Sharing Card is to send a greeting to physician families as well as to raise funds for AMA-ERF. In 1950, AMA-ERF was established to help support quality medical education. In 1955, the AMA Auxiliary was called upon for assistance. Due to Auxiliary efforts, contributions from individual physicians grew quickly. AMA-ERF has, as a result, averaged gifts of over $1 million yearly since the Auxiliary became involved.

In 1984-85, $750,000 was raised nationally by Sharing Card projects. (The national average Sharing Card donation is between $30 and $40.) In Indiana in 1984-85, $21,000 of our total $34,000 for AMA-ERF was raised through Sharing Card projects. Our goal is to have each member contribute to AMA-ERF. County Sharing Cards encourage 100% participation.



Gifts to AMA-ERF may be designated to the medical school of your choice. A donor also decides if his gift is to be allocated to the Medical School Excellence Fund or to the Medical Student Assistance Fund. The unrestricted money of the Medical School Excellence fund is used by each medical school dean as he sees fit. At Indiana University this funds a clinical and research program. Each medical school sets its own policy for the Medical Student Assistance Fund, designed to provide money for educational needs. The Foundation has distributed more than $40 million in gifts to medical schools. AMA-ERF is our only national philanthropic endeavor.

The ISMA Auxiliary Board members and past presidents listed in the accompanying Sharing Card have made contributions to AMA-ERF ($850.00) and send greetings of the season to the medical families of Indiana.—Lura Stone (Robert C.), AMA-ERF chairman

Joy to You And Your Family

The 1985 ISMA-A Board Sharing Card was designed by Suzanne K. Miller (John D., Bluffton), recording secretary. Suzanne studied the Auxiliary Collect:

> Thank you, Father, for granting us another day.
>
> As we share in our spouse's lives, may we be understanding and kind, realizing that they have many burdens we cannot share. Make us true companions and helpmates, and give us the joy that comes from service to others. Amen.

The phrase, "the joy that comes from service to others," impressed her as the essence of our purpose as medical families. Suzanne combined the word joy from that phrase with Muriel Osborne's theme, "reach for the stars," to design the Sharing Card that accompanies this article.

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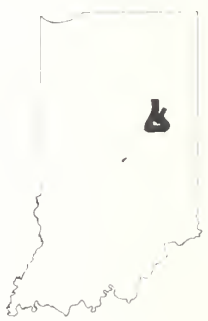
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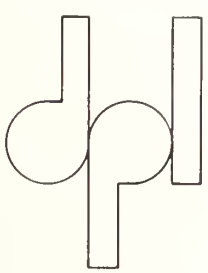
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All diplomates of the ISMA are invited to enter a professional card in the *Directory*.

NEWS NOTES

Here and There . . .

Dr. Francis B. Warrick, a Richmond internist, received the Paul S. Rhoads Humanity in Medicine award during an October meeting at Reid Memorial Hospital.

Dr. Kenneth E. Elek of South Bend is a new diplomate of the American Board of Family Practice.

Dr. Barbara Backer of LaPorte has received the American Heart Association's recognition award for 20 years of service.

Recognized for long-standing membership in the American Academy of Family Physicians:

Dr. L. L. Frank, South Bend, 25 years;

Dr. Richard C. Fretz, Kokomo, 25 years;

Dr. John Hildebrand, South Bend, 30 years;

Dr. Donald C. Miller, Cedar Lake, 30 years.

Dr. Dean Cofield of Bloomington discussed "Advances in Eye Surgery" during an October public health lecture at Bloomington Hospital.

Dr. Stephen K. Kruse of Evansville discussed "Modern Trends in Eye Care" during a September community education program sponsored by Howard Community Hospital.

Dr. Richard T. Miyamoto of Indianapolis has been elected to a four-year term on the Executive Committee of the American Auditory Society.

Dr. Malcolm B. Herring of Indianapolis has begun serving a three-year term on the Council of the Midwestern Vascular Surgical Society.

Dr. William Ragan of Indianapolis, chairman of the Indiana State Maternal Mortality Committee since 1971, has been notified that, for the 14th consecutive year, funding for the Maternal Mortality and Education Project would continue; the grant, approved by the state health commissioner, covers the period Oct. 1, 1985 through Sept. 30, 1986.

Dr. Rodger D. Saylors of Michigan City discussed children with asthma during an October program co-sponsored by Memorial Hospital and the American Lung Assn.



Dr. Holden

Dr. Robert W. Holden of Indianapolis has been elected chairman of ISMA's newly formed Hospital Medical Staff Section.

Dr. Fouad Halaby of Fort Wayne is the new president of the Indiana Peer Review Organization (IPRO), succeeding Dr. Paul F. Muller of Carmel, who has been elected to the board of directors of the American Medical Professional Review Assn. (AMPRA).

Dr. Frank D. Pairitz of South Bend discussed radiation treatments during a recent meeting of Families Facing Cancer.

Dr. James A. Fountain of Indianapolis and Dr. Samuel M. Wentworth of Danville addressed a diabetes interest group in Vincennes in October.

Dr. John L. Haste of Argos is the new president of the Marshall County Chapter, American Diabetes Assn.

Dr. Richard L. Need and Dr. James D. Rogge, advisors for the St. Francis Hospital Center's geriatric care unit in Beech Grove, discussed "Vitality and Aging" during a recent community outreach program conducted at the hospital.

Dr. Shannon K. McCarthy of Merrillville discussed "Angina and Its Treatment" during the October meeting of the local Coronary Club.

Dr. Jeffrey R. Yessenow of Munster discussed premenstrual syndrome (PMS) during an October program presented at St. Margaret Hospital.

Discoverer of Gene Marker Linked to PKD Visits I.U.

Dr. Stephen Reeders, lecturer at Oxford University who recently discovered the gene marker of Polycystic Kidney Disease (PKD), visited the I.U. Medical Center in October to confer with researchers there.

Two years ago, a team of scientists that included several I.U. faculty members discovered the marker for Huntington's Disease. Both diseases are hereditary, and both fail to demonstrate diagnostic symptoms and findings until the patient is old enough to have become a parent of children who may inherit either disorder. Hence, both conditions tend to persist and multiply.

Dr. Reeders employed DNA technology to discover the gene marker, as did the combined team that worked on Huntington's Disease. It is not certain that heredity is the only factor causing PKD. It is anticipated that research funds will be obtained to continue the genetic lead, in addition to the other investigations that have been in operation in the past.

Merger to Provide Lilly Diagnostics Market Entry

Eli Lilly and Company and Hybritech Inc. of San Diego have entered into a definitive agreement for the acquisition of Hybritech by Lilly.

Hybritech is a leading innovator of monoclonal antibody technology for medical diagnosis and treatment.

The transaction is subject to approval by Hybritech shareholders.

Buckle Up Successes

Safety Belt Laws in several states have been a startling success. Laws in effect since Jan. 1, 1985 in New York and since July 1, 1985 in Michigan have reduced deaths by 28% over previous years. In Illinois enforcement has been in effect since Aug. 1; fatalities are down by 27.9%. New Jersey reports a 13% decline in deaths in the first four months.

New ISMA Members

The following physicians were welcomed in October as new members of the Indiana State Medical Association:

Larry W. Banyash, M.D., Muncie, family practice

Anardo Betances, M.D., Batesville, anesthesiology

Michelle M. Blake, M.D., Anderson, obstetrics and gynecology

Wichest Boonyapredee, M.D., Munster, pediatrics

Richard N. Bowling, M.D., Kokomo, family practice

Fred Doloresco, M.D., Fort Wayne, internal medicine

Ned E. Fleming, M.D., Munster, family practice

Catherine I. Hatvani, M.D., Lafayette, physical medicine and rehabilitation

Robert M. Holmes, M.D., Lafayette, internal medicine

Gartrell D. King, M.D., Gary, internal medicine

David Kuhaneck, M.D., Lawrenceburg, psychiatry

Arshad P. Malik, M.D., Merrillville, internal medicine

Timothy M. McClure, M.D., Jasper, radiology

James S. Moeller, M.D., Argos, family practice

Andrew J. Myrick, M.D., Wabash, general surgery

Robert A. Rea, M.D., Goshen, ophthalmology

INDIANA STATE MEDICAL ASSOCIATION

Ravinder S. Reddy, M.D., Crawfordsville, internal medicine

Francis X. Roche, M.D., Merrillville, radiology

Vivente B. Santelices, M.D., Rushville, anesthesiology

Gregory P. Weckenbrock, M.D., Aurora, family practice

Robert A. Yount, M.D., South Bend, neurological surgery

William D. Zimmer, M.D., Fort Wayne, diagnostic radiology

Janice Zunich, M.D., Gary, pediatrics

Residents:

Mark W. Bradley, M.D., Indianapolis, family practice

Craig A. Bugno, M.D., Muncie, family practice

Karen S. Evans, M.D., Fort Wayne, family practice

Clifford W. Fetters, M.D., Fort Wayne, family practice

P. Kevin Gerth, M.D., Indianapolis, orthopedic surgery

Donald J. Giant, M.D., Fort Wayne, family practice

Harry C. Harvey III, M.D., Fort Wayne, family practice

Bradley S. Healton, M.D., Fort Wayne, family practice

Leanne S. Lake, M.D., Indianapolis, family practice

Steven Lobue, M.D., Indianapolis, general surgery

Joseph A. Lopez, M.D., Fort Wayne, family practice

Thomas G. Nill, M.D., Fort Wayne, family practice

Ronald G. Smith, M.D., Indianapolis, family practice

Tim E. Taber, M.D., Indianapolis, nephrology

J. Frank Vormohr, M.D., Fort Wayne, family practice

Jeffrey L. Witt, M.D., Fort Wayne, family practice

Physician Recognition Awards

The following ISMA physicians are recent recipients of the AMA's Physician Recognition Award. This award is official documentation of Continuing Medical Education hours earned, and is acceptable proof in most states requiring CME in re-registration that the mandatory hours of CME have been accomplished.

Balamohan, Ramalingam, Bluffton
Bankoff, David L., South Bend
Bicalho, Jose F., Merrillville
Borenstein, Aaron, Fort Wayne
Botkin, Clyde G., Muncie
Brewer, David W., Evansville
Burt, Robert W., Indianapolis
Byllesby, Joyce E., Washington
Chandra, Sekhar N., Connersville
Foster, Lowell G., Indianapolis
Guinigundo, Noli C., Brookville
Hernandez-Flores, G.E., Highland
Krueger, John E., Fort Wayne
Kurtz, Richard, Indianapolis
Massuda, Yacoub, Valparaiso
Nakamura, Takamitsu, Munster
Neil, Wilbur A., Terre Haute
Pancner, Ronald J., Fort Wayne
Sabens, James A., Indianapolis
Sandock, Mark S., Granger
Sankey-Swaim, Peggy L., Rockville
Schmetzer, Alan D., Indianapolis
Servies, Herschell Jr., Lebanon
Smith, H.C., Bluffton
Van Buskirk, Edmund L., Lafayette
Wilson, Franklin D., Indianapolis
Wind, Joseph L., South Bend
Wippermann, David R., Franklin
Yast, Charles J., Merrillville

NEWS NOTES

For the Asking . . .

• The AMA is calling attention to two new books in the "AMA Home Health Library." They are the *American Medical Association Guide to Better Sleep* and the *American Medical Association Guide to Health and Well-Being After 50.* These books are being recommended as a valuable addition to the physician's office, and are also excellent health education material for the general public. These and other volumes in the "AMA Home Health Library" are available in local bookstores at $8.95 each. For more information, write or phone Managing Editor, Consumer Book Program, AMA, 535 N. Dearborn, Chicago 60610—(312) 280-7175.

• The National Hemophilia Foundation is accepting applications for the Judith Graham Pool Postgraduate Research Fellowships for the 1986-87 academic year. Deadline for applications is Jan. 1, 1986. Write to the Foundation at The Soho Building, 110 Greene St., Room 406, New York, N.Y. 10012.

• "Dietary Fiber to Lower Cancer Risk" is the title of an eight-page booklet published by the American Institute for Cancer Research. The booklet, suitable for professionals and the general public, explains fiber, how to determine its proper intake, and how to increase fiber content in the diet if the diet is deficient. For a free copy, send a stamped, self-addressed, business-sized envelope to the Institute, Dept. DF, Box 76216, Washington, D.C. 20013.

• TAP Pharmaceuticals announces a newsletter describing Lupron® (leuprolide acetate), a new hormone for palliative treatment of prostatic cancer. Leuprolide is therapeutically equivalent to DES for objective response, time to treatment failure and overall survival, and produces fewer side effects of a less serious nature than those of DES. Copies of the newsletter are available at no charge on request by phoning 800-621-1020, or by writing TAP Pharmaceuticals, 1400 Sheridan Road, North Chicago, Ill. 60064.

• "Effective Utilization Review: How to Get It" is the title of the lead article in the September issue of "The Medical Practice Letter." The article criticizes the "Length of Stay" criterion and the DRG basis of review. Both are based on inaccurate statistics and, apparently, have induced hospital administrations to adopt a program of observing lengths of stay (LOS) for various DRGs as practiced by different physicians and applying persuasion to the longer LOS physicians to dismiss patients. The article outlines what is considered a more acceptable approach—"Appropriateness Evaluation Protocol." Single copies of the newsletter may be obtained for $12. Write The Medical Practice Letter, 227 Everit St., New Haven, Conn. 06530.

• The new international AIDS publication, "CDC AIDS Weekly," is available to subscribers for $520 per year, a rate that is reduced to $450 per year for those subscribing for two or more years. It is privately published and is not sponsored by, endorsed by, affiliated with, or officially connected with the Centers for Disease Control or its AIDS branch. The address is 1409 Fairview Road, Atlanta, Ga. 30306.

• Hewlett-Packard has published the fourth international edition of the *Users Guide to Supplies and Accessories for Medical Instrumentation.* The book lists a variety of HP Medical Products, including more than 350 electronic instruments and systems, as well as nearly 400 supplies and accessories. Write to Inquiries Manager, Hewlett-Packard Co., Medical Products Group, 3000 Minuteman Road, Andover, Mass. 01810.

• The recent increase in in-office laboratory analyses being done with microprocessor-controlled instrumentation is discussed by various authors in the September issue of *The Internist*, published by the American Society of Internal Medicine (ASIM). The authors examine the reasons underlying the growth of office laboratory procedures, the advantages, possible disadvantages, the tendency toward overuse, and the necessity for effective quality controls. For a copy of the September issue, send $2 to ASIM, 1101 Vermont Ave., N.W., Suite 500, Washington, D.C. 20005. One-year subscriptions are $12.

Crippled Children's Program Marks 50 Years

This year marks the 50th anniversary of the Indiana State Crippled Children's Program, a Social Security Title V activity, administered by the Indiana State Dept. of Public Welfare.

"During this season, we join our sister agency, the Indiana State Board of Health, and the federal government in celebrating a half century of Maternal and Child Health Service," Dr. Joseph M. Daly, director of the Division of Services for Crippled Children, said in a letter to INDIANA MEDICINE. "Every good wish goes forward to colleagues who have so generously supported this endeavor since 1935," he said.

Hospital Medical Staff Section Officers Elected

The ISMA's newly formed Hospital Medical Staff Section met for the first time Sept. 8 in Indianapolis and elected seven physicians who will comprise its Executive Committee. They are:

Dr. Robert W. Holden of Plainfield, chairman; Dr. Dean L. Strycker of South Bend, vice-chairman; Dr. Paul Gentile of Fort Wayne, secretary-treasurer; Dr. Richard A. Silver of Indianapolis, delegate; Dr. George C. Manning of Fort Wayne, alternate delegate; Dr. Robert H. Rang of Washington, member-at-large; and Dr. Allan M. Miller of Bloomington, member-at-large.

The primary goals of the ISMA HMSS are to: a) provide a forum for all medical staffs in Indiana to meet and discuss common issues and work together toward solution of common problems; b) increase awareness of issues that are affecting physicians as members of hospital medical staffs; and c) increase multi-directional communications among hospital administration, county medical societies, the ISMA and hospital medical staffs.

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THE INDIANA MEDICAL FOUNDATION, INC.

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Indianapolis 46208

A foundation for charitable, educational, and scientific purposes, organized by the ISMA as an endowment fund to support the educational mission of the Association and INDIANA MEDICINE.

Bequests, legacies, devises, transfers or gifts to the Foundation or for its use are deductible for federal estate and gift tax purposes, in accordance with the Internal Revenue Code.

The Foundation is managed by a board of directors that comprises the members of the ISMA Executive Committee. At present, proceeds from the Foundation investments are awarded to INDIANA MEDICINE to further the continuing medical education program.

Memorial contributions made to the Foundation in lieu of flowers will be acknowledged by the secretary in a letter to the family of the deceased.

"for religious, charitable, scientific, literary or educational purposes"

OBITUARIES

C. Powell VanMeter, M.D.

Dr. VanMeter, 67, an Indianapolis general practitioner, died Sept. 13 at his home in Carmel.

He was a 1942 graduate of Indiana University School of Medicine and was an Army veteran of World War II.

Dr. VanMeter was a former president of the Marion County Medical Society and a former chief of the medical staff at Community Hospital, Indianapolis. He was a member of the American Academy of Family Physicians and was a diplomate of the American Board of Family Practice.

J. Neill Garber, M.D.

Dr. Garber, 76, an Indianapolis orthopedic surgeon, died Oct. 15 at St. Vincent Hospital.

He was a 1932 graduate of Indiana University School of Medicine and was an Army veteran of World War II.

Dr. Garber was a professor of orthopedic surgery at the I.U. School of Medicine. He was a former president of the American Orthopaedic Association. He was a diplomate of the American Board of Orthopaedic Surgery and his professional memberships included the American Academy of Orthopaedic Surgeons and the British Orthopaedic Association. He was enrolled in the ISMA Fifty Year Club in 1982.

Clifford C. Taylor, M.D.

Dr. Taylor, 82, a retired Indianapolis radiologist, died Sept. 15 at his home.

He was a 1929 graduate of Indiana University School of Medicine and was an Army veteran of World War II. He retired in 1982.

Dr. Taylor developed the x-ray department at Community Hospital when the hospital opened in 1956. He was a fellow of the American College of Radiology and a former president of the Indiana State Roentgen Ray Society. He was a diplomate of the American Board of Radiology and was a member of the ISMA Fifty Year Club.

Paul D. Williams, M.D.

Dr. Williams, 81, a retired Indianapolis psychiatrist, died Oct. 26 at his home.

He was a 1927 graduate of Indiana University School of Medicine. He retired from practice in 1974.

During World War II, Dr. Williams served as superintendent of the former East Haven Hospital in Richmond, now known as Richmond State Hospital. He worked at Central State Hospital in Indianapolis for 20 years before retiring. He was certified by the American Board of Psychiatry and Neurology and was a member of the American Psychiatric Association. He also was a member of the ISMA Fifty Year Club.

Norman N. Holtzman, M.D.

Dr. Holtzman, 58, a former South Bend internist, died Oct. 15 in Evanston, Ill.

He was a 1951 graduate of the University of Illinois College of Medicine.

Dr. Holtzman, who practiced in South Bend 20 years, had been a life insurance company medical director in Aurora, Ill., since 1977. He was certified by the American Board of Internal Medicine. His professional affiliations included the American Academy of Family Physicians, the American College of Physicians and the American Society of Internal Medicine.

Donald E. Stephens, M.D.

Dr. Stephens, 67, an Indianapolis general practitioner, died Oct. 11 in Reno, Nev., where he was on vacation.

He was a 1943 graduate of Indiana University School of Medicine and was a Navy veteran of World War II.

Dr. Stephens was a former president of the Marion County Medical Society and served several years as an ISMA delegate. He was a member of the American Academy of Family Physicians and a charter member of the Indiana Academy of Family Physicians.

Herbert P. Hargett, M.D.

Dr. Hargett, 67, a retired Jeffersonville ophthalmologist, died Sept. 18 in Florida.

He was a 1943 graduate of the University of Louisville School of Medicine and was an Army veteran of World War II.

Dr. Hargett was certified by the American Board of Ophthalmology and was a member of the American Academy of Ophthalmology. He retired from practice last year.

Thomas B. Bauer, M.D.

Dr. Bauer, 72, a retired Indianapolis plastic surgeon, died Oct. 10 at his home in Sun City, Ariz.

He was a 1938 graduate of Indiana University School of Medicine. He had been a professor at the school until he retired in 1972.

Dr. Bauer was certified by the American Board of Plastic Surgery. His professional memberships included the American College of Surgeons and the American Society of Plastic and Reconstructive Surgeons.

John E. Wyttenbach, M.D.

Dr. Wyttenbach, 84, a retired Indianapolis surgeon, died Sept. 17 at Methodist Hospital.

He was a 1924 graduate of Indiana University School of Medicine and was an Army veteran of World War II. He later retired from the Army Reserves after nearly 30 years service.

Dr. Wyttenbach served five years as chief deputy coroner of Marion County, beginning in 1929. He spent 16 years as police and fire surgeon for the city of Indianapolis, 10 years as surgeon for the Indiana Dept. of Highways, 10 years as a part-time medical consultant for disability determinations for the state, and four years as chief medical consultant. He closed his private practice in 1969. He was a member of the ISMA Fifty Year Club.

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PSYCHIATRIST, Tri-County Mental Health Center, Inc.—Psychiatrist needed to join staff of expanding community mental health center serving northside of Indianapolis and Boone and Hamilton counties. The position includes a balance of inpatient and outpatient responsibilities and can be tailored to the individual's interests. Competitive salary and fringe benefits. E.O.E. Please contact or send resume to A. J. LaClave, M.D., Medical Director, Tri-County Mental Health Center, Inc., 11711 N. Meridian St., Suite 600, Carmel, Ind. 46032—Tel: (317) 875-4637.

EMERGENCY MEDICINE Position Available: Opportunity for experienced Emergency Physician to join professional group practicing in Hobart and Gary, Indiana. Contact Dr. Cornelius Arnold at (312) 747-7115.

VERSATILE SURGEON wanted to complement aggressive family practice group in rural northeastern Minnesota resort community. Well equipped 40-bed hospital with proven surgical practice volume. Outstanding outdoor recreational opportunities with time off to enjoy it. Reply with CV to E. Johnson, Ely Medical Center, Ltd., 224 E. Chapman St., Ely, Minn. 55731—(218) 365-3151.

OFFICE SPACE AVAILABLE: Four-year-old office designed for solo practitioner. 1,470 sq. ft. Excellent practice location—2 miles from 600-bed multispecialty hospital. Evansville, an ideal site for practice and family. Contact: S. E. Braun, M.D., 8420 Chapel Hill W., Evansville, Ind. 47712—(812) 985-5556.

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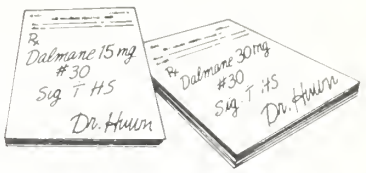
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